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Flying Operations

E-4 AIRCREW TRAINING

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This instruction implements guidance in AFD 11-2, *Aircraft Rules and Procedures*; AFD 11-4, *Aviation Service*; and AFI 11-202, Volume 1, *Aircrew Training*. It establishes the minimum standards for training and qualifying personnel performing duties in the E-4. This publication does not apply to Air National Guard or Air Force Reserve Command units and members. MAJCOMs are to forward proposed MAJCOM-level supplements to this volume to HQ USAF/XOOT, through HQ ACC/XOF, for approval prior to publication IAW AFD 11-2, paragraph 4.2. Copies of MAJCOM-level supplements, after approved and published, will be provided by the issuing MAJCOM to HQ USAF/XOOT, HQ ACC/XOF, and user MAJCOM offices of primary responsibility. Field units below MAJCOM level will forward copies of their supplements to this publication to their parent MAJCOM office of primary responsibility for post publication review. Keep supplements current by complying with AFI 33-360, Volume 1, *Publications Management Program*. This instruction requires the collection or maintenance of information protected by the Privacy Act of 1974. The authority to collect and maintain the records prescribed in this instruction are Title 37 USC 301a, Incentive Pay; Public Law 92-204 (Appropriations Act for 1973), Section 715; Public Law 93-570 (Appropriations Act for 1974); Public Law 93-294 (Aviation Career Incentive Act of 1974); Air Force Instruction 11-401, *Flight Management*; and E.O. 9397. System of records notice F011 AF XO A, Air Force Operations Resource Management System (AFORMS) applies. The reporting requirements in this instruction are exempt from licensing IAW paragraph 2.11.10 of AFI 37-124, *The Information Collection and Reports Management Program*; Controlling Internal, Public, and Intraagency Air Force Information Collections.

SUMMARY OF REVISIONS

The majority of changes in this revision are the result of adding a new continuation ground training table with new events and the combining of communication specialist career fields. Changed paragraphs and tables are denoted by a bar (|). Paragraph 1.3.3: FE retainability changed from 48 months to 36 months. Paragraph 1.5.4.1: CMR definition changed slightly to be commensurate with the new BMC definition. Paragraph 1.5.4.2: BMC definition changed to allow for fewer training requirements for highly experi-

enced crews working staff level jobs. Paragraph 1.6.7: reflects new training cycle period beginning 1 Oct 99. Paragraph 1.10.2: RPI 6 added. Table 1.1: Changed for clarification and ease of reading. Paragraph 2.2.1: FAA type I check deleted. Paragraph 2.2.2: reworded and aircraft availability verbiage added. Table 2.1: Includes all of the communications positions. Table 2.2: changed to correct previous errors in descriptions. Table 2.3: New table replacing Table 2.4. Table 2.4: Deleted. Paragraph 3.3: reworded for clarity. Table 3.1: Additional notes added. Table 3.2 and Table 3.3: numerous changes to table as a result of career field mergers. Paragraph 4.7 and paragraph 4.8 added. Table 4.2: new ground training requirements table, which provides more guidance for ground training events. Table 4.3: completely revised table reflecting new BMC, CMR, new events, and max in sim rates--recommend complete review. Table 5.1: communications positions added. Table 5.2: minor changes to training event descriptions. Table 5.3: heading changed to reflect added communications positions. Abbreviations and acronyms: ACC/XO, XOF, and XOFR replace ACC/DO, DIS, and DISA and reflect the ACC reengineering effort, ACS-T—new communications position, FA replaces IPSS, NPES—added, mission crew and system engineer—definition changed, RPI—added. Tables A2.1, A2.2, A2.4 through A2.9 all have changes and should be completely reviewed.

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Chapter 1

GENERAL INFORMATION

1.1. References and Supporting Information . See Attachment 1.

1.2. Responsibilities:

1.2.1. HQ ACC/XO is designated as the responsible agency for this instruction IAW AFD 11-2, *Aircraft Rules and Procedures*. The ACC/XO will:

1.2.1.1. Chair semi-annual ACC Realistic Training Review Boards (RTRB) to review ground and flying training requirements/programs for Combat Air Force (CAF) units. RTRB participants will include applicable ACC active and reserve component representatives. MAJCOM/XO/DOs with major weapons systems for which ACC is lead command will be invited to send representatives and/or inputs.

1.2.1.2. Process all change requests.

1.2.2. All applicable Major Commands (MAJCOM) will, as applicable:

1.2.2.1. Determine training requirements to meet expected unit taskings.

1.2.2.2. Forward all MAJCOM/FOA/DRU supplements to HQ ACC/XOFR, who in turn will forward to HQ USAF/XOOT for approval prior to publication; and forward one copy to HQ USAF/XOOT after publication. Provide all MAJCOM/XO/DOs a copy of approved supplements to this instruction.

1.2.2.3. Review subordinate unit supplemental instructions and supplemental training programs annually.

1.2.3. Direct Reporting Units (DRU) will:

1.2.3.1. Provide standard instructional texts to support operational weapons/tactics training. Forward two copies of each to MAJCOM and NAF/DO/OV, and five copies to each CAF wing/group.

1.2.3.2. Review, update, and distribute changes to instructional texts annually.

1.2.3.3. Review subordinate unit training programs annually.

1.2.4. Wings/Groups will:

1.2.4.1. Develop programs to ensure training objectives are met. Assist subordinate units in management of training programs, ensure programs meet unit needs, and provide necessary staff support. ACC wing/groups will also assist ANG unit training programs as required/requested IAW the Air Reserve Components unit advisory support program.

1.2.4.2. Attach RPI-6/8 flyers to a flying squadron.

1.2.4.3. Designate the training level that each RPI-6 flyer will train to. Upon request provide MAJCOM/XOF (ANG: ACC/XOG) with a list of Basic Mission Capable (BMC) and Combat Mission Ready (CMR) designated manning positions. Review programs and manning position designations annually.

1.2.4.4. If applicable, forward supplements of this instruction to MAJCOM for review. Review supplements annually.

1.2.5. Squadron Supervision will:

1.2.5.1. Ensure adequate continuity and supervision of individual training needs, experience, and proficiencies of assigned/attached aircrew.

1.2.5.2. Ensure review of training and evaluation records of newly-assigned aircrew and those completing formal training, to determine the training required for them to achieve BMC or CMR and to ensure provisions of this instruction have been met.

1.2.5.3. Ensure Ready Aircrew Program (RAP) missions are oriented to developing basic combat skills, or practicing tactical employment simulating conditions anticipated in the unit mission. Provide guidance to ensure only effective RAP missions are logged as RAP sorties. See attachment 2 for RAP mission definitions.

1.2.5.4. Review qualifications and training requirements of Flight Surgeons (FS) and determine appropriate flight restrictions.

1.2.5.5. Determine mission(s)/events in which individual Basic Mission Capable (BMC) aircrew will maintain qualification versus familiarization.

1.2.5.6. Determine utilization of BMC aircrew.

1.2.5.7. Determine how many and which BMC and CMR aircrew will carry special capabilities/qualifications.

1.2.5.8. Identify the levels of supervision required to accomplish the required training, unless specifically directed.

1.2.5.9. Determine breadth and depth of supervisory review of weapon delivery recordings.

1.2.5.10. Assist the wing/group in developing the unit training programs.

1.2.5.11. Monitor individual assigned/attached aircrew currencies and requirements.

1.2.5.12. Ensure aircrews only participate in sorties, events, and tasks for which they are adequately prepared, trained, and current.

1.2.6. Crewmembers will:

1.2.6.1. Hand carry all available training records to assist the gaining unit in assessing qualifications and training requirements.

1.2.6.2. Be responsible for completion of training requirements within the guidelines of this instruction.

1.2.6.3. Ensure they participate only in activities for which they are qualified and current.

1.3. Processing Changes:

1.3.1. Forward recommendations for change to this instruction to MAJCOM on AF Form 847, **Recommendation for Change of Publication**. HQ USAF/XO is the approval authority for interim (IC) changes and revisions to this instruction.

1.3.2. MAJCOMs will forward approved recommendations to HQ ACC/XO through HQ ACC/XOFR.

1.3.3. HQ ACC/XO will:

1.3.3.1. Process recommendation for change.

1.3.3.2. Address time sensitive changes by immediate action message.

1.4. Minimum Requirements for Assignment to Perform E-4 Crew Duties:

1.4.1. Pilots will be currently qualified in Tanker/Transport/Bomber (TTB) jet aircraft or a previously qualified pilot in the E-4, have 2,500 hours total time and 1,500 hours TTB jet aircraft time with current or previous TTB jet receiver air-refueling experience, and be able to obtain a Top Secret/Sensitive Compartmentalized Information (TS/SCI) clearance.

1.4.2. Navigators will be currently qualified in TTB aircraft, have 2,000 hours of total time and 1,000 hours in TTB aircraft with previous air refueling experience (tanker or receiver), and be able to obtain a TS/SCI clearance.

1.4.3. Flight engineers (FEs) will be currently qualified instructors with 3,000 hours FE time, have 36 months retainability upon completion of Mission Qualification Training (MQT), possess a 7 skill level (craftsman), and be able to obtain a TS/SCI clearance.

1.4.4. Flight Attendants must be grade E-4 through E-7 and have 36 months retainability upon completion of MQT and be eligible for a TS clearance.

1.4.5. Airborne Communications Specialty crewmembers (Semi-Automatic Switching System (SASS) Data, Radio, Radio Maintenance, Tech Control and Dual Trailing Wire Operators) and Super-High Frequency Operators must satisfy the requirements of AFI 36-2110, *Airman Assignments*.

1.5. Training. Training is designed to progress the crewmember from Initial Qualification Training (IQT) or Transition/Re-Qualification Training (TX) (Phase I), through Mission Qualification Training (MQT) (Phase II), and finally to Continuation Training (CT) (Phase III).

1.5.1. IQT qualifies crewmembers in a basic crew position and flying duty without regard to the unit's mission. There are no positions in the E-4 that qualify individuals as Basic Aircraft Qualification (BAQ).

1.5.2. MQT qualifies a crewmember in the E-4 mission. The E-4 training program combines IQT and MQT in one course of study. The single flight evaluation advances crewmembers from Unqualified (UQ) to CT.

1.5.3. CT allows crewmembers to maintain combat capability, increase proficiency, and consists of mission-related training. Phase III crewmembers are designated BMC or CMR.

1.5.4. Ready Aircrew Program (RAP) is the CT program designed to focus training on capabilities needed to accomplish the E-4 mission.

1.5.4.1. CMR. Defines an aircrew member who has satisfactorily completed initial and mission qualification in the unit's primary mission. All 1 ACCS crewmembers are initially qualified to CMR status. CMR crewmembers maintain proficiency and qualification in the 1 ACCS mission. Failure to complete CMR required training results in designation as Non-CMR (N-CMR).

1.5.4.2. BMC positions in the 1 ACCS are filled by highly experienced crewmembers whose primary job is squadron/group/wing/NAF/MAJCOM staff support of the flying operation. These crewmembers provide additional sortie generation capability, either in lieu of or in addition to CMR personnel. BMC crewmembers, because of their high experience and proficiency level, have a reduced training level requirement as compared with CMR personnel. BMC crewmembers accomplish all ground training designated by the 1 ACCS/CC. Failure to complete BMC required training results in regression to Non-BMC (N-BMC) status.

1.5.4.3. N-CMR/N-BMC. Crewmembers designated N-CMR/N-BMC are not combat ready and must accomplish a tailored training plan to regain CMR/BMC. Crewmembers are designated N-CMR/N-BMC for failure to meet ground training, annual flight training, or sortie lookback requirements IAW Table 1.1.

1.5.4.4. Unqualified (UQ). Unqualified crewmembers require training and a flight evaluation to reach the next qualification level. Crewmembers may be designated UQ for the following reasons:

1.5.4.4.1. Enrolled in Initial Qualification Training (IQT) or Requalification Training.

1.5.4.4.2. Non-Current IAW AFI 11-202V1.

1.5.4.4.3. Demonstrated lack of ability.

1.5.4.4.4. Downgraded for failure to meet standards during a flight evaluation.

1.5.4.5. Aircrew Experience Level. There are two experience levels for CT crewmembers: “Inexperienced” and “Experienced.”

1.5.4.5.1. “Inexperienced” crewmembers have the least amount of experience in their position. They gain more experience through additional training to increase their proficiency.

1.5.4.5.2. “Experienced” crewmembers require less training to maintain proficiency.

1.5.4.6. Experience Level Progression. The commander designates crewmembers “experienced” based on progression guidelines and demonstrated proficiency.

1.5.4.6.1. Experienced pilots should have 200 hours primary E-4 time.

1.5.4.6.2. Experienced navigators should have 200 hours primary E-4 time.

1.5.4.6.3. Experienced flight engineers should have 400 hours primary E-4 time.

1.5.4.6.4. Experienced Flight Attendants should have 100 hours primary E-4 time.

1.5.4.6.5. Experienced communication control officers, airborne communications specialists, and SHF maintenance/operators should have 100 hours of primary E-4 time.

1.5.4.6.6. Experienced ACS-T crewmembers should have 50 hours primary E-4 time or six months as a System Engineer (SE).

1.5.4.7. Instructor/Evaluator Qualified. Instructors/evaluators who become N-CMR/N-BMC may be allowed to continue academic and/or ATD instructor/evaluator duties with 55 OG/CC approval.

1.5.4.8. Special Capabilities and Qualifications. Special capabilities and qualifications are not separate qualification levels. Under the RAP, units are required to carry crewmembers trained to

special capabilities or qualifications to meet all training requirements. The nature of the capability or qualification either precludes or does not require training the entire unit. Sortie requirements specified for a special capability are over and above the individual qualification sortie requirement unless otherwise noted. Additional sorties, associated events, and qualifications must be accomplished for a designated special capability. Special qualifications in the 1 ACCS are instructor, evaluator, alert aircraft commander, and functional check flight crewmember.

1.6. Training Concepts and Policies:

1.6.1. Design training programs to achieve the highest degree of combat readiness consistent with flight safety and resource availability. Training must balance the need for realism against the expected threat, crewmember capabilities, and safety. This instruction provides training guidelines and policies to be used with operational procedures specified in applicable publications.

1.6.2. ACC Training Support Squadron will develop and validate training programs when tasked by HQ ACC.

1.6.3. Design training missions to achieve combat capability in squadron tasked roles, maintain proficiency, and enhance mission accomplishment and safety. RAP training missions should emphasize scenarios that reflect procedures and operations based on employment plans, location, current intelligence, and opposition capabilities.

1.6.4. In-flight Supervision:

1.6.4.1. The following personnel must be under the direct supervision of an instructor when performing crewmember duties.

1.6.4.1.1. Unqualified crewmembers.

1.6.4.1.2. Crewmembers performing event(s) to regain currency.

1.6.4.1.3. Crewmembers performing mission/special qualification training sorties.

1.6.4.1.4. Senior officers defined in AFI 11-202V1.

1.6.4.1.5. Crewmembers designated N-CMR/N-BMC.

1.6.4.1.6. Any senior officer who has not completed initial qualification training requirements of **Chapter 2** including an appropriate flight evaluation.

Note: This paragraph does not preclude the wing or group commander from requiring other staff personnel to fly with an instructor.

1.6.5. Training Event Tables. Assign crewmember training tables according to their experience designation and RAP level.

1.6.6. When experience designation or RAP level changes, prorate new training requirements from the date of certification.

1.6.7. The aircrew training cycle is 12 months: 1 Oct through 30 September.

1.6.8. Crewmembers will not be required to accomplish ground or ancillary training except as required by this instruction or AFI 36-2201, *Developing, Managing, and Conducting Training*.

1.7. Ready Aircrew Program (RAP) Policy and Management:

1.7.1. Each RAP qualification level is defined by a total number of RAP sorties, broken down into mission types, plus specific qualifications and associated events as determined by the MAJCOM and unit commanders.

1.7.2. The primary means of assessing crewmember qualification is the monthly RAP sortie requirement. The breakout of sortie/mission types is provided as a guideline to be closely followed, but minor variations are expected. Shortfalls in the monthly sortie requirement are the basis for regression. The squadron commander determines mission qualification after considering ACC guidance and the individual's capabilities.

1.7.3. An effective RAP training sortie requires accomplishing a tactical mission profile or a building block type sortie.

1.7.4. The squadron commander's first priority should be to train all designated crewmembers to CMR.

1.7.5. Progression from BMC to CMR requires:

1.7.5.1. One month of continuation training meeting the CMR sortie rate.

1.7.5.2. Confirmation that the progressed crewmember can complete the prorated number of event requirements to remain CMR at the end of the training cycle.

1.7.5.3. Completion of mission-related ground training.

1.7.5.4. Squadron commander certification.

1.7.6. Three-month Lookback. Table 1.1 defines the monthly sortie requirement for a crewmember to remain mission ready. If a crewmember fails to accomplish the monthly sortie requirement, review sortie accomplishment over the last three months. Failure to achieve the three-month sortie requirement results in designation as N-BMC or N-CMR. If the crewmember does not have three months of flying experience, the monthly requirement must be satisfied.

1.7.7. The squadron commander directs crewmembers to maintain special capabilities or qualifications. Specialized training may require training beyond baseline CMR/BMC requirements.

1.8. RAP Sortie Program Development:

1.8.1. RAP sortie and event requirements apply to all CT crewmembers.

1.8.2. Non-RAP requirements are in addition to RAP requirements. These sorties ensure basic crewmember skills are maintained.

1.8.3. Collateral or cost of business sortie requirements must be considered when developing unit flying hour programs. These sorties are not directly related to combat employment training but are necessary in day to day unit operations. These include but are not limited to ferry flights, incentive flights, deployments, and air shows.

1.8.4. Unit flying hour programs are designed to compensate for non-effective training sorties. Training sorties are non-effective when a major portion of planned training is not accomplished due to weather, air aborts, etc. In order to accurately allocate E-4 flying hours, it is essential that lost training events and reasons for loss are accurately logged on the Mission Accomplishment Report (MAR).

1.9. Training Records and Reports. Maintain and dispose of aircrew records created as a result of processes prescribed by this AFI IAW AFMAN 37-139, *Records Disposition Schedule*.

1.9.1. Document and maintain crewmember certification/upgrade training in individual training folders IAW AFMAN 37-139.

1.9.2. Prepare and forward training reports IAW MAJCOM directives.

1.9.3. AFORMS will maintain flying and ground training records IAW AFI 11-401. Use AFORMS forms prescribed in AFI 11-202, Volume 1, to document training in AFORMS.

1.10. Aircrew Utilization Policy:

1.10.1. Commanders will ensure crewmembers fill authorized positions IAW unit manning documents and that crewmember status is properly designated. The overall objective is that crewmembers perform combat-related duties. Supervisors may assign crewmembers to valid, short-term tasks (escort officer, FEB/mishap board member, etc.), but must continually weigh the factors involved, such as level of crewmember tasking, flying proficiency, currency, and experience. For inexperienced crewmembers in the first year of their initial operational assignment, supervisors will limit the non-flying duties to those related to combat activities.

1.10.2. RPI-6/8 rated personnel flying authorizations and Test Unit aircrews will be IAW AFI 11-401 and MAJCOM guidance. They will fly the BMC sortie rate, however they are not required to complete BMC specific missions/events or meet lookback requirements. Units should provide assigned RPI-6/8 flyers adequate resources to maintain minimum training requirements. However, RPI-6/8 flyer support will not come at the expense of the flying squadron's primary mission. RPI-6/8 flyers will accomplish non-RAP requirements with allotted BMC sorties. If attached units cannot meet attached flyer requirements, they must request relief IAW AFI 11-401, ACC Sup. Units requiring flying hour adjustments for attached RPI-8 and applicable RPI-6 flyers must request program changes IAW ACCI 11-103.

1.10.3. The following duties will not be assigned at the squadron level: AF Suggestion Program Monitor, Weapons/Explosive Safety Manager, and Operations Security (OPSEC) Monitor.

1.10.4. Duties required by various publications that may be assigned to unit crewmembers are weapons and tactics officer, programmer, flying safety officer, Supervisor of Flying (SOF), mobility/contingency plans, training (except AFORMS documentation), squadron Standardization/Evaluation Liaison Officer (SELO), squadron life support officer, electronic combat officer, and other duties directly related to flying operations. In some instances, crewmembers may be attached to the wing, group, or the Operations Support Squadron. The commander will ensure these crewmembers perform duties justified in MAJCOM manpower standards documents and authorized in Unit Manning Documents (UMD).

1.10.5. Crewmembers will normally not be assigned to perform the following squadron non-flying additional duties: building custodian, unit Communications Security (COMSEC) program monitor, disaster preparedness monitor, enlisted career advisor, functional area records manager, fund/campaign manager, unit ground safety program monitor, information officer, Individualized Newcomer Treatment and Orientation (INTRO) monitor, resource advisor, cost center manager, records technician, Freedom of Information Act monitor, Privacy Act officer, security manager, telephone control monitor, vehicle control monitor, voting advisor, enlisted advisory council representative, human

Chapter 2

INITIAL QUALIFICATION TRAINING

2.1. Scope. This chapter contains prerequisites and minimum training requirements necessary to prepare prospective crewmembers to perform duties in the E-4 aircraft.

2.2. Time Period to Qualify:

2.2.1. All time limitations specified in **Table 2.1** begin on the date of the first aircraft flight after entry into a training program. For mission crew multiple position qualification, the time limits apply to each position's initial qualification period, which may run concurrently.

2.2.2. Extension of Time Limits. Time limits may be extended by the number of days:

2.2.2.1. The aircraft is not available for training, or

2.2.2.2. The member is not available for training (emergency leave, Duty Not Including Flying (DNIF) status, non-flying TDY, or awaiting security clearance). Individuals in formal training under the provisions of this manual should not be sent TDY unless it is absolutely necessary. Requests to interrupt training with TDY will be approved by the 1 ACCS/CC. Provide as much training as possible while awaiting security clearance.

2.2.3. After entry into formal training, individuals will not normally be granted ordinary leave until such training is completed. Exceptions to this policy must be approved by the 1 ACCS/CC and documented in the individual's training folder.

2.3. Ground/Flying Requirements:

2.3.1. Pilots and flight engineers complete an FAA approved commercial training course for Boeing 747 aircraft, followed by in-unit initial qualification training specified in **Table 2.2**.

2.3.1.1. FAA approved commercial training course.

2.3.1.1.1. Training consists of Aircraft General Systems, Normal Procedures, Abnormal/Emergency Procedures, and Flight Simulators per the contract. The flight simulators will allow pilots 50% time in both seats with the flight engineer performing panel operation half of the time and observing the other half.

2.3.1.1.2. The training is complete upon satisfactory completion of an FAA simulator evaluation.

2.3.2. Navigators receive initial qualification in-unit in accordance with **Table 2.2**.

2.3.3. Flight Attendants complete an FAA approved commercial training course for Boeing 747 aircraft followed by in-unit initial qualification training specified in **Table 2.2**.

2.3.4. Communication Control Officers, Airborne Communication Specialty, and SHF crew members receive IQT or TX in-unit IAW **Table 2.3**.

2.3.5. Academic training should be completed prior to flight training and will be accomplished in accordance with initial qualification training requirements of **Table 2.2** or **Table 2.3**.

2.3.6. An instructor of like specialty will recommend individuals for evaluation. The individual's upgrade monitor will review the training records prior to the evaluation to ensure all appropriate training has been completed and documented.

2.4. Requalification. All individuals requalifying in the E-4 will accomplish the training prescribed in **Table 2.2** and **Table 2.3** as well as **Table 3.1**, **Table 3.2** and **Table 3.3**, as applicable under the time constraints of Table 2.1. Pilots and flight engineers will also accomplish GS09.

2.4.1. Unqualified up to 3 years. Complete appropriate requalification academic course in unit or formal flying school as directed by the squadron commander, and an evaluation. Squadron commander will determine if attendance of a FAA approved training course is required.

2.4.2. Unqualified over 3 years. Complete appropriate formal initial qualification course.

Table 2.1. Initial Qualification Time Limits (All).

CREW SPECIALTY	TIME LIMIT (Days)
Pilot	120
Navigator	90
Flight Engineer	120
Flight Attendant	90
Communication Control Officer*	120
Airborne Communications Specialist-SASS*	90
Airborne Communications Specialist-Radio*	120
Airborne Communications Specialist-Data A/B*	120/60
Dual Trailing Wire Operator*	120
Radio Maintenance 1*	120
Radio Maintenance 2*	180
SHF Maintenance/Operator*	150
Technical Control 1*	120
Technical Control 2*	120
Instructor	60
* Students will complete all ground training and have a valid TS/SCI clearance before IQT is started.	

Table 2.2. Initial Qualification Training Requirements P/N/FE/FA.

CODE	TRAINING EVENT	P	N	FE	FA
AA21	AFI 11-202, Volume 2, Qualification Evaluation	1	1	1	1
AG01*	E-4 Systems Course	1	1	1	1
AP09	Enroute Descent	P			
AP20	ILS	P			
AP22	Category II ILS (Manual)	P			
AP26	Missed Approach (Manual)	P			
AP27	Missed Approach (Auto)	P			
AP30	Circling Approach	P			
AP31	NDB Approach	P			
AP39	Instrument Approach/Missed Approach simulated engine-out	P		P	
AP40	PAR	P			
AP51	Holding Pattern	P			
AP56	Approach (Monitored)		P		
AP68	Visual Pattern	P			
AP90	Category II/IIIa Certification	1			
DP05	Instrument Departure	P			
GA03*	Anti-Hijacking Procedures	1	1	1	1
GA23**	CRM (Cockpit Resource Management)	1	1	1	1
GA48	CPR				1
GS05	Food Handlers				1
GS14	Briefing and Control of Passengers				P
GS16	Pre-takeoff Procedures				P
GS18	Post Flight Procedures	P	P	P	P
GS20*	Aircraft Systems and Equipment Operation	1	1	1	1
GS26	Checklist Procedures/Use	P	P	P	P
GS35	IRC	1	1		
GS37	Proficiency Exam	1	1	1	1
GS38	Emergency Procedures Exam	1	1	1	1
GS70	Emergency Procedures	P	P	P	P
GS71	Forms Knowledge				P
GS72	Menu Planning				P
LD01	Landing, Day	P		P	
LD02	Landing, Night	P		P	
LD11	Touch & Go Landing	P		P	
LD14	Landing, Reverse Thrust	P		P	
LD33	Approach/Landing, Full Stop simulated engine-out	P		P	
LD41	Category II/IIIa Autoland	P		P	
LS06*	Life Support Equipment (LSE) Training	1	1	1	1
LS08*	Egress Training, Non-ejection	1	1	1	1
ME19	Mission Planning/Briefing	P	P	P	P

CODE	TRAINING EVENT	P	N	FE	FA
ME20	Crew Coordination	P	P	P	P
ME92	Air Stair Operation	P	P	P	P
ME94	Descent Procedures	P	P	P	P
NE01	Systems Navigation Leg		P		
NE04	Celestial Position		P		
NE11	General Navigation		P		
NE14	INS/INU Continuous/Manual Update		P		
NE15	INS/INU Bearing/Distance Update		P		
NE22	Continuous Three INS Mixing/INU Differential Updating		P		
NE36	INS/Flight Management System (FMS) Operation		P		
NE90	Celestial Heading Check		P		
ST00	Sortie	P	P	P	P
TO00	Takeoff	P		P	P
TO22	Climb Procedures	P	P	P	P
TO25	Takeoff Engine Failure After V1	P		P	
TO26	Departure (Monitored)		P		
*	Must be completed prior to first flight.				
**	AA21 may be conducted prior to GA23. Complete GA23 as soon as training is available.				

Table 2.3. Initial Qualification Training or Transition Training Requirements.

ACS-S/ACS-R/ACS-D/ACS-T/DTWO/SHE/CCO.		
CODE	TRAINING EVENT	All Positions
AG01*	E-4 Systems Course	1
AG05	Regulation & Directive Orientation	P
GA03*	Anti-Hijacking Procedures	1
GA13**	COMSEC	1
GS20	Aircraft Systems and Equipment Operation	1
GS30	Alert Procedures	1
GS70*	Emergency Procedures	1
GS71	Forms Knowledge	1
LS06*	Life Support Equipment Training	1
LS08*	Egress Training, Non-ejection	1
* Must be completed prior to first flight.		
** Individuals need to possess a TS/SBI clearance for this event.		
Note. IQT can be in any of the above positions. The requirements above must be completed first, then continue position training on the events listed in Table 3.2 or Table 3.3		

Chapter 3

MISSION QUALIFICATION TRAINING

3.1. Scope. This chapter prescribes requirements an individual must accomplish to complete Mission Qualification Training.

3.2. Mission Qualification Training. Table 3.1, Table 3.2, and Table 3.3 list training that must be completed by a crewmember before the squadron commander can declare the individual CMR. MQT may be accomplished concurrently and dual credited with other training requirements in this instruction.

3.3. Alert Participation. Only current and qualified BMC/CMR crewmembers will be placed on alert. BJCBarry Cousler Unqualified crewmembers with proper clearance may be attached to the alert crew for training purposes but are not considered part of the alert team. Individuals declared BMC/CMR but subsequently delinquent in ME21 or LD11 may still be placed on alert.

[illegible]

Table 3.2. Mission Qualification Training Requirements: ACS-S, CCO, ACS-R, ACS-D/A, and ACS-D/B.

CODE	TRAINING EVENT	ACS-S	CCO	ACS-R	ACS-D/A	ACS-D/B
AA21	AFI 11-202V2, Qualification Evaluation	1	1	1	1	1
AG05	Regulation & Directive Orientation		P		P	P
CE01	Console, Equipment Controls	P	P	P	P	P
CE02	Internal Communications System	P	P	P	P	P
CE04	UHF Command Radio System		P	P		
CE05	Call Processing	P	P			
CE06	UHF Sat Voice Radio System		P	P		
CE07	HF Communication System		P	P		
CE08	MF Radio		P	P		
CE10	UHF Networks	P	P	P		
CE11	Special User Systems	P	P	P		
CE12	Secure Voice Systems		P	P		
CE14	DSCS ECCM Networks		P		P	
CE15	MWTTY		P		P	
CE16	SCT Network		P		P	
CE17	HF Networks		P	P		
CE18	HHD Procedures		P	P		
CE19	UHF SATCOM (AFSAT)		P			P
CE20	Secure Data Circuits		P		P	
CE21	MPS Procedures		P		P	
CE23	UHF DAMA System		P			P
CE24	EHF System		P			P
CE25	EHF Net Procedures		P			P
CE27	Force Report Back Procedures		P	P	P	P
CE28	Encryption/Decryption/Authentication		P	P	P	P
CE29	Operational Procedures	P		P	P	P
CE30	EAM Procedures	P	P	P	P	P
CE31	SASS	P				
CE32	Radio			P		
CE33	Lowspeed				P	
CE34	AUTODIN				P	
CE35	MILSTAR					P
CE36	VLF/LF				P	
CE109	INMARSAT		P	P		
GS26	Checklist Procedures/Use	P	P	P	P	P
GS37	Proficiency Exam	1	1	1	1	1
GS38	Emergency Procedure Exam	1	1	1	1	1
ME19	Mission Planning/Briefing	P	P	P	P	P
ME20	Crew Coordination	P	P	P	P	P
ST00	Sortie	1	1	1	1	1

Table 3.3. Mission Qualification Training Requirements: TC-1, TC-2, RM-1, RM-2, DTWO, CCO and SHF.

CODE	TRAINING EVENT	TC-1	TC-2	RM-1	RM-2	DTWO	SHF	CCO
AA21	AFI 11-202V2, Qualification Evaluation	1	1	1	1	1	1	
CE02	Internal Communications Systems			P	P			
CE03	Electronic Switching System				P			P
CE04	UHF Command Radio System			P				
CE06	UHF Satellite Voice Radio System				P			
CE07	HF Communication System				P			
CE08	MF Radio				P			
CE09	VLF/LF Communication System			P	P			P
CE11	Special User Systems				P			
CE12	Secure Voice Systems				P			
CE13	Message Processor System				P			P
CE37	VLF PA-C/DTWA Operations	P		P				P
CE40	VLF PA-C Operations			P				
CE41	Crypto/Teletype						P	
CE45	Airborne Performance Monitor		P		P			
CE90	TC-1 Console	P						P
CE91	Cooling Air	P					P	P
CE92	Cooling Liquid	P					P	P
CE93	Electrical Systems-AC	P					P	P
CE94	Electrical Systems-DC	P					P	P
CE96	TC-2 Console		P					P
CE97	MIB Knowledge	P	P	P			P	
CE98	Ground Entry Point Knowledge		P					P
CE100	Patch and Test Facility		P		P		P	P
CE101	Circuit Configuration/Operations		P				P	P
CE102	CAPS						P	P
CE103	Receiver Transmitter Group						P	P
CE104	AN/USC-28						P	P
CE105	Single Channel Transponder						P	P
CE106	SHF Console						P	P
CE108	FDMA						P	P
CE109	INMARSAT				P			
CE110	Multiplex Systems		P		P			P
CE111	UHF/FDM		P		P			P
CE112	Miscellaneous Electronics		P		P			
CE115	Automatic Switchboard				P			P
CE116	Tape Recorder System				P			
CE118	CPI/Voice Recorder			P				
CE119	VHF Command Radio System			P				P
CE120	Weather Radar/Rendezvous Beacon			P				
CE121	LRRA			P				
CE122	TACAN			P				

CODE	TRAINING EVENT	TC-1	TC-2	RM-1	RM-2	DTWO	SHF	CCO
CE123	IFF			P				
CE124	Global Positioning System (GPS)			P				
CE125	VOR/ILS/Marker Beacon			P				
CE127	DTWA Controls and Indicators					P		P
CE128	DTWA Modes of Operation					P		P
CE129	Antenna Pointing Group						P	P
CE130	NPES				P			P
CE131	Digital Wall Clock System				P			
CE132	Ground Line Facilities				P			P
CE133	MILSTAR				P			P
GS26	Checklist Procedures/Use	P	P	P	P	P	P	
GS37	Proficiency Exam	1	1	1	1	1	1	
GS38	Emergency Procedure Exam	1	1	1	1	1	1	
ME19	Mission Planning/Briefing	P	P	P	P	P	P	
ME20	Crew Coordination	P	P	P	P	P	P	
ST00	Sortie	1	1	1	1	1	1	

Chapter 4

CONTINUATION TRAINING

4.1. Scope. This chapter prescribes training standards to maintain qualification and currency of crewmembers in the E-4.

4.2. Academics/Ground Training. Academics/Ground training is intended to be accomplished at regular intervals, which are contained in **Table 4.2**. The following symbols will be used to establish the regular frequency of training.

- 4.2.1. I – Initial. Must be accomplished once during initial qualification training or if event is a new requirement.
- 4.2.2. BI - Biennial. Must be accomplished no later than the end of the 24th month from the month last accomplished.
- 4.2.3. A - Annual. Must be accomplished once per annual training cycle.
- 4.2.4. SA - Semiannual. Must be accomplished no later than the end of the 6th month from the month last accomplished.
- 4.2.5. Q - Quarterly. Must be accomplished no later than the end of the third month from the month last accomplished.
- 4.2.6. M - Monthly. Must be accomplished each month.
- 4.2.7. AR - As Required by governing instructions.

4.3. Flying Training. Academic training will be completed prior to starting the E-4 flight phase. Flying training requirements will be accomplished as outlined in **Table 4.3**.

4.4. Proration of Training:

- 4.4.1. Training requirements for crewmembers who are not available for duties as outlined in AFI 11-202V1, will be prorated. Commanders will not prorate to meet RAP lookback requirements.
- 4.4.2. Enter the number of months a crewmember is unavailable into the AFORMS to prorate remaining training. AFORMS prorates the annual event table using the following formula:
 - 4.4.2.1. $\text{Events remaining} = \text{Annual Events} \times (\# \text{ months available} / 12)$, truncated to the nearest whole number.
- 4.4.3. Crewmembers completing MQT and receiving CMR certification during a given month start continuation training on the first day of the following month. Training accomplished during IQT/MQT is not counted toward CT requirements remaining after attaining CMR status. Initial currency dates for recurring training events are established by the date of the AFI 11-202V2 evaluation. For events not accomplished on the initial evaluation (such as night landings) the initial currency date is established by the date the event was last accomplished and graded proficient. All requirements for crewmembers departing PCS or separating will be prorated to the last day of the month preceding the month of departure. Refer to AFI 11-202V1, for further guidance.

4.4.4. Flying and academic training requirements for crewmembers that are not available for normal duties will be prorated according to **Table 4.1**.

Table 4.1. Pro-ration Table.

Continuous Days Unavailable	Months Proration
0-30	0
31-45	1
46-75	2
76-105	3
106-135	4
136-165	5
166-195	6
196-225	7
226-255	8
256-285	9
286-315	10
316-345	11
346-366	12
Non-Continuous Days Unavailable	
>45	2

4.5. Failure to Complete Training Requirements. Individuals who fail to complete their BMC/CMR ground and flight requirements will be designated N-BMC/N-CMR and will have their recent training history reviewed by the squadron commander. The squadron commander will determine what training is necessary for the crewmember to regain BMC/CMR status. This make-up training is creditable towards the new training period. If this review indicates a proportionate/realistic volume of the BMC/CMR events were recently accomplished that would ensure combat proficiency, the squadron commander may declare the individual BMC/CMR.

4.6. Loss of Currency. Individuals delinquent in one or more continuation training events will be placed on supervised status for those events and declared N-BMC/N-CMR (N/A for ME21 and LD11). Currency will be regained IAW AFI 11-202V1. If a flight check is not required, annotate on the AFTO Form 781, **AFORMS Aircrew/Mission Flight Document**, and MAR that currency is regained.

4.7. US/Russia Prevention of Dangerous Military Activities. Initial, annual refresher, and pre-deployment training for the prevention of Dangerous Military Activities will be conducted to ensure that all pilots are familiar with the agreement and the implementing provisions contained in CJCSI 2311.01.

4.8. Crew Resource Management (CRM). Units will participate in MAJCOM established CRM. Each pilot, navigator, flight engineer, and flight attendant is required to participate in one session every 24 months.

4.9. Commercial Contract Aircraft Continuation Training. When commercial contract B-747 training (wet lease) is available, pilots and flight engineers will maximize logging flying events in that aircraft under the provisions of the commercial vendor. Events that are not necessarily E-4 specific should be accomplished and counted for currency and volume. Complete mission accomplishment reports as you would for an E-4 sortie.

Table 4.2. Ground Training Requirements.

MOBILITY TRAINING						
These items are required for mobility units or units that generate in place						
CODE	COURSE	REFERENCE DIRECTIVE	FREQ	POS	GRNDG	AFFECTCMR/ BMC
	Anti-Hijacking Training	AFI 13-207 (FOUO)	BI	ALL	NO	NO
AIRCREW TRAINING						
	Physiological Training (Altitude Chamber)	AFI 11-403	Every 5 years	ALL	YES	YES
AG20	ACS-S	AFI 11-2E-4V1	Q	ACS-S	NO	NO
AG21	ACS-R	AFI 11-2E-4V1	Q	ACS-R	NO	NO
AG22	ACS-D	AFI 11-2E-4V1	Q	ACS-D	NO	NO
AG23	Instructor	AFI 11-2E-4V1	Q	IACS, ISHF, IDTWO, ICCO	NO	NO
AG24	ACS-T, DTWO	AFI 11-2E-4V1	Q	ACS-T, DTWO	NO	NO
AG25	SHF	AFI 11-2E-4V1	Q	SHF	NO	NO
GA23	CRM (Cockpit Resource Mgt)	AFI 11-2E-4V1 Chapter 4	BI	P/N/FE/FA	YES (waiver by WG/CC)	YES (waiver by WG/CC)
GA48	CPR	AFI 11-2E-4V1	A	FA	YES	YES
GS05	Food Handlers	AFI 11-2E-4V1	A	FA	NO	NO
GS09	Simulator 1,2,3	AFI 11-2E-4V1 Chapter 7	SA	P/FE	NO	NO
GS35	Instrument Refresher	AFMAN 11-210 and AFI 11-202V2, as supplemented	AR	P/N	YES	YES
GS42	SIOP Study	AFI 11-2E-4V1	SA	P/N/FE	NO	YES
GS44	SIOP Mission Certification	AFI 11-2E-4V1	AR	P/N/FE	NO	YES
GS51	Cockpit Procedural Trainer	AFI 11-2E-4V1	SA	P/FE	NO	NO
GS52	Emer/Normal Pro & Sys Review	AFI 11-2E-4V1	SA	ACS, CCO, SHF, DTWO	NO	NO
GS53	Category II/IIIa Refresher	AFI 11-2E-4V1	SA	P	NO	NO
LS06	LSE/Water Survival Training	AFI 11-301 as supplemented	A	ALL	YES	YES
LS08	Egress Training, Non-ejection	AFI 11-301 as supplemented	A	ALL	YES	YES
LS11	Low-Threat Combat Survival Training	AFI 11-301 as supplemented	BI	ALL	NO	NO

Table 4.3. Continuation Flight Training Annual BMC/CMR Requirements.

PILOT		BMC		CMR		Max in Sim (Note 9)		Freq	Notes
I-Inexperienced E-Experienced									
CODE	TRAINING EVENT	I	E	I	E	I	E		
AP01 *	Precision Approach	30	20	60	40	15	10		2,6
AP04 *	Non-Precision Approach	15	10	30	20	8	5		6
AP09 *	Penetration (Enroute)	12	8	24	16	6	4		6
AP20 *	ILS	18	10	36	20	15	10		2,6,8
AP22 *	Cat II ILS (Manual)	12	6	24	12	6	4		2,6,8
AP26 *	Missed Approach (Manual)	6	4	12	8	4	3		6
AP27	Missed Approach (Auto)	6	4	12	8				
AP30	Circling Approach	6	4	12	8				2
AP31 *	NDB Approach	6	4	12	8	4	3		6
AP40	PAR	6	4	12	8				2
AP42 *	Instrument Approach	45	30	90	60	23	15	1/45	6
AP86	Visual Pattern	6	4	12	8				
AP70	Proficiency Exercise	4	2	5	3				5
AP73	GPS Approach	6	4	12	8				
AP80	IP Supervised/IP Proficiency	2	1	2	1				5
AP90	Category II/IIIa Certification							1/180	
AR14	Receiver A/R Tanker AP Off	4	2	10	4				
AR15	Receiver Rendezvous	4	2	14	8				
AR25	Receiver Air Refueling	12	10	28	20			1/45	3
AR44	Receiver Air Refueling Night	4	2	8	4			1/90	3
DP05 *	Instrument Departure	12	8	24	16	6	4		6
LD00 *	Total Landings	39	30	78	60	19	12	1/45	1,6
LD01 *	Landing, Day					14	8		1,6
LD02 *	Landing, Night	6	4	20	16	5	4	1/90	1,6
LD10	Landing, Short Field	3	3	6	6			1/180	1,7
LD10a	Maximum Brake Full Stop Landing	1	1	1	1				
LD11 *	Touch & Go Landings (IP Only)							1/45	1,4,6
LD13 *	Landing, Full Stop	10	8	26	18	6	4	1/60	1,6
LD41	Category II/IIIa Autoland	6	4	12	8	3	2		1
ME21	Instructor/Evaluator Duties	2	1		2				
ME30	Alert/Training Taxi Exercise	6	6	12	12				

ME31 *	Low Pass Visual Rendezvous	3	3	6	6	2	2		6
ME90	Rendezvous Proc. Exercise	3	3	6	6				
ME91	Block Time Control Exercise	3	3	6	6				7
NE21	TWA Activity	2	1	4	2				
SR41	Pilot RAP Sortie	6	4	12	12				
ST00	Sortie	36	24	52	36				
TO00 *	Takeoff	12	8	24	16	6	4	1/45	6

Notes:

1. Credit LD00 when accomplishing LD01, LD02, LD10, LD11, LD13, or LD41.
2. Credit AP01 when accomplishing AP20, AP22, or AP40.
3. Credit AR25 when accomplishing AR44.
4. Loss of currency in LD11 does not result in N-BMC or N-CMR status.
5. Credit AP70 when accomplishing AP80.
6. “*” items may be logged in the simulator, not to exceed the max allowed in sim during training cycle.
7. LD10 & ME91 for Alert Aircraft Commanders only.
8. Credit AP20 when accomplishing AP22.
9. Max in Sim applies to both BMC and CMR.

NAVIGATOR		BMC		CMR		Freq	Notes
I-Inexperienced E-Experienced							
CODE	TRAINING EVENT	I	E	I	E		
AP56	Approach (Monitored)	16	12	60	36		
AR15	Receiver Rendezvous	10	8	20	14	1/45	1,2
AR27	Point Parallel Rendezvous	8	6	16	12		1,2
AR32	Enroute Rendezvous	2	2	4	2		1,2
ME21	Instructor/Evaluator Duties	2	2		2		
ME30	Alert/Training Taxi Exercise	4	4	8	4		
ME31	Low Pass Visual Rendezvous	2	2	4	4		
ME90	Rendezvous Proc. Exercise	2	2	4	4		
ME91	Block Time Control Exercise	3	2	6	4	1/60	2
NE01	System Navigation Leg	4	4	4	4		
NE03	Celestial Fix	2	2	2	2		
NE04	Celestial Position	4	4	4	4		
NE14	INS/INU Continuous Update	16	12	36	24		
NE15	INS/INU Bearing/Distance Update	16	12	30	18		
NE16	Manual Update	16	12	30	18		
NE21	TWA Activity	2	1	4	2		

NE22	Cont. Three INS Mixing/INU differential updating	16	12	30	18		
NE90	Celestial Heading Check	4	4	4	4		
SR61	Navigator RAP Sortie	8	8	12	12		2
ST00	Sortie	36	24	52	36		
TO26	Departure (Monitored)	16	12	60	36		

Notes:

1. Credit AR15 when accomplishing AR27 or AR32
2. Credit may be awarded while instructing items that meet definition of SR61

FLIGHT ENGINEER		BMC		CMR		Max in Sim	Freq	Notes
I-Inexperienced E-Experienced								
CODE	TRAINING EVENT	I	E	I	E	I	E	
AP70	Proficiency Exercise	4	3	12	4			
AR25	Receiver Air Refueling	5	4	24	10			1
LD00 *	Landing	20	16	52	36	9	6	1/45 1,3,4
LD11 *	Touch & Go Landing							I=1/45 E=1/ 60 1,2,3,4
LD13 *	Landing, Full Stop	16	12	38	24	9	6	1/45 1,3,4
ME21	Instructor/Evaluator Duties	2	1		4			
ME30	Alert/Training Taxi Exercise	4	2	8	4			
ME90	Rendezvous Proc Exercise	2	2	4	4			1
NE21	TWA Activity	2	1	5	2			
SR71	Engineer RAP Sortie	12	6	24	12			
ST00	Sortie	36	24	52	36			
TO00 *	Takeoff	16	12	48	24	9	6	1/45 1,3,4

Notes:

1. Credit may be awarded when instructing TO00, LD00, LD11, LD13, AR25 and ME90 only when the student is non-current, or unqualified.
2. Loss of currency in LD11 does not result in N-BMC or N-CMR status.
3. TO00, LD00, LD11 and LD13 can be logged only once per simulator training period.
4. “*” items may be logged in the simulator, not to exceed the max allowed in sim for training cycle.

FLIGHT ATTENDANT		BMC		CMR		Freq	Notes
I-Inexperienced E-Experienced							
CODE	TRAINING EVENT	I	E	I	E		
AR25	Receiver Air Refueling	3	2	6	6		1,2

ME21	Instructor/Evaluator Duties	1	1		2		
ME30	Alert/Training Taxi Exercise	4	2	8	4		
ME90	Rendezvous Procedure Exercise.	2	2	4	4	1/90	2
SR81	FA RAP Sortie	6	4	12	12		
ST00	Sortie	36	24	52	36		

Notes:

1. Credit AR25 when pilots accomplish AR25 or AR44.
2. Credit may be awarded when instructing AR25 and ME90 only when the student is non-current or unqualified.

SHF

I-Inexperienced E-Experienced		BMC		CMR		Freq	Notes
CODE	TRAINING EVENT	I	E	I	E		
CE51	SHF Operator/Maintenance (SHF)		3	8	4		
ME21	Instructor/Evaluator Duties					1/60	1
ST00	Sortie	7	6	10	8	1/60	
SX17	Communications RAP Sortie	12	12	12	12		

ACS-T

I-Inexperienced E-Experienced		BMC		CMR		Freq	Notes
CODE	TRAINING EVENT	I	E	I	E		
CE38	Radio Maintenance One (RM1)	5	3	8	4		
CE39	Radio Maintenance Two (RM2)	5	3	8	4		
CE43	Technical Control One (TC1)	5	3	8	4		
CE44	Technical Control Two (TC2)	5	3	8	4		
CE59	TWA Cycle	5	3	8	4		
CE87	DTWA Operations (DTWO)	5	3	8	4		
ME21	Instructor/Evaluator Duties					1/60	1
ST00	Sortie	7	6	10	8	1/60	
SX17	Communications RAP Sortie	12	12	12	12		

ACS-S

I-Inexperienced E-Experienced		BMC		CMR		Freq	Notes
CODE	TRAINING EVENT	I	E	I	E		
CE42	SASS	6	4	10	8		
ST00	Sortie	8	6	12	10	1/60	
SX17	Communications RAP Sortie	12	12	12	12		

ACS-R								
I-Inexperienced E-Experienced			BMC		CMR		Freq	Notes
CODE	TRAINING EVENT		I	E	I	E		
CE42	SASS		6	4	10	8		
CE46	Radio		6	4	10	8		
ME21	Instructor/Evaluator Duties						1/60	1
ST00	Sortie		8	6	12	10	1/60	
SX17	Communications RAP Sortie		12	12	12	12		
ACS-D								
I-Inexperienced E-Experienced			BMC		CMR		Freq	Notes
CODE	TRAINING EVENT		I	E	I	E		
CE42	SASS		6	4	10	8		
CE47	Milstar		6	4	10	8		
CE48	Autodin		6	4	10	8		
CE49	Lowspeed		6	4	10	8		
CE50	VLF/LF		6	4	10	8		
CE52	Message Processing System		6	4	10	8		
ME21	Instructor/Evaluator Duties						1/60	1
ST00	Sortie		8	6	12	10	1/60	
SX17	Communications RAP Sortie		12	12	12	12		
COMMUNICATION CONTROL OFFICER								
I-Inexperienced E-Experienced			BMC		CMR		Freq	Notes
CODE	TRAINING EVENT		I	E	I	E		
ME21	Instructor/Evaluator Duties						1/90	1
ST00	Sortie		6	4	10	8	1/60	
SX17	Communications RAP Sortie		12	12	12	12		
Notes:								
1. Loss of currency in ME21 does not result in N-BMC or N-CMR status.								

Chapter 5

SPECIALIZED TRAINING

5.1. Scope. This chapter contains prerequisites and training requirements necessary to prepare crewmembers to perform specialized duties in the E-4 aircraft. This includes instructor upgrade for all positions, alert A/C qualification, and any other specialized training above the BMC/CMR qualification.

5.2. Instructor Upgrades. This section prescribes the requirements to be an instructor on the E-4 in all applicable specialties.

5.2.1. Prerequisites. Flying time requirements are depicted in **Table 5.1**. Instructor candidates in E-4 aircraft must satisfy these prior to being designated as instructors and performing instructor duties. Training and evaluation requirements may be accomplished prior to attaining these minimums, however the individual may not be designated as an instructor nor perform instructor duties until these requirements are met.

Table 5.1. Minimum Flying Time Requirements for Instructor Upgrade.

POSITION	TOTAL E-4 TIME
Pilot	500 or 300 (NOTE 1)
Navigator	500 or 300 (NOTE 1)
Flight Engineer	500 or 300 (NOTE 1)
Flight Attendant	400 or 100 (NOTE 1)
ACS-R/ACS-D/CCO/SHF/DTWO	100 (NOTE 2)
Systems Engineer (SE)	50 (NOTE 3)
Notes: 1. One-year instructor experience in another TTB aircraft and one year as an E-4 aircraft commander, navigator, flight engineer or flight attendant. 2. Should have 100 hours in their primary position or one year as a mission ready crewmember. 3. Should have 50 hours or six months as a Systems Engineer.	

5.2.1.1. MAJCOM Instructor Course. To develop a more professionally trained instructor force, it is mandatory that pilots, navigators, flight engineers and flight attendants complete a MAJCOM level instructor course prior to performing instructor duties. A MAJCOM level instructor academic course is optional though highly desirable for instructor ACS/ DTWO/SHF/CCO personnel.

5.2.2. Responsibilities for Instructor Upgrades:

5.2.2.1. The squadron commander will select instructor candidates, monitor upgrade training, and document the completion of training. The commander will designate all instructors in writing including additional staff personnel if unit training requirements dictate the utilization of such personnel. Flight instructors will be designated as flight examiners by the commander to fulfill the requirements of AFI 11-202V2.

5.2.2.2. Instructors will instruct, demonstrate and supervise activity involving aircraft normal, emergency, and instrument procedures/techniques. Instructors will also administer all requalification training for loss of currency and recurring academic training.

5.2.3. Instructor Training Requirements:

5.2.3.1. Upgrade Requirements. Candidates will complete a course for their specialty developed by the 1 ACCS/DOT and successfully complete an AFI 11-202V2 evaluation. Candidates are allowed 60 days after entry into the program to complete training. Additional training beyond these prescribed minimums will be at the discretion of the squadron commander.

5.2.3.2. Proficiency. Instructor candidates will demonstrate proficiency in all activities in which they could be required to instruct (**Table 5.2** and **Table 5.3**). Instructors who have been non-current as instructors in excess of one year must re-accomplish these training requirements. Those who have been non-current less than one year will receive training as directed by the 1 ACCS/CC.

5.2.3.3. Academics. Instructor candidates who have previously completed and documented item AG10, Instructor Academic Training, for this or any other MAJCOM approved program need only accomplish that portion pertaining to regulations and manuals AG05. AG10 will be accomplished prior to flight training.

5.2.3.4. Student Briefing and Critique. Each candidate will receive training in student briefing and critique. The instructor giving this training will use the guidelines outlined under instructor check in AFI 11-2E-4V2, *E-4 Aircrew Evaluation Criteria*.

5.2.3.5. Flight Training. Training for all crew positions will be IAW the requirements outlined in the applicable instructor course syllabi. Schedule a minimum of two missions. For pilots one mission must include night transition, touch-and-go landings and night receiver air refueling. All pilot flight training requirements must be accomplished from the right seat. Instructor candidates will demonstrate and instruct in all phases of flight. Emphasis will be placed on proper procedures, flying and instructional techniques, and safety.

5.2.3.6. Policies. Upgrade training will be administered by instructor qualified crewmembers of like specialty and will be IAW with HQ ACC/XO approved syllabi.

5.2.4. Evaluations:

5.2.4.1. An instructor of like specialty will recommend individuals for an evaluation. The individual's upgrade monitor will review the individuals training records after the recommendation and prior to the evaluation to ensure all appropriate training has been successfully completed and documented. The instructor recommending a student for evaluation should not act as the evaluator for the student's evaluation.

5.2.4.2. Flight Examiner Upgrades. For flight examiner upgrade requirements, see AFI 11-202V2.

| **Table 5.2. Instructor Upgrade Training Requirements P/N/FE/FA.**

CODE	TRAINING EVENT	PILOT	NAV	FE	FA
AA21	AFI 11-202V2, Qualification Evaluation	1	1	1	1
AG01	E-4B System Course				1
AG10	Instructor Academic Training (See Note 1)	1	1	1	1
AP04	Non-Precision Approach	P			
AP09	Penetration (Enroute)	P			
AP20	ILS	P			
AP22	Cat II ILS (Manual)	P			
AP26	Missed Approach (Manual)	P			
AP27	Missed Approach (Auto)	P			
AP30	Circling Approach	P			
AP31	NDB Approach	P			
AP39	Instrument Missed Approach Simulated 3 Engine	P		P	
AP40	PAR	P			
AP51	Holding Pattern	P			
AP56	Approach (Monitored)		P		
AP68	Visual Pattern	P			
AP90	CAT II/IIIa Certification	1			
AR14	Receiver A/R Tanker AP Off	P			
AR15	Receiver Rendezvous	P	P		
AR24	Radio Silent, Visual Signals	P			
AR25	Receiver Air Refueling	P		P	P
AR27	Point Parallel Rendezvous		P		
AR30	Receiver Rendezvous Overrun Procedures	P	P		
AR32	En route Rendezvous		P		
AR39	Receiver Air Refueling Envelope Demonstration.	P			
AR44	Receiver Air Refueling, Night	P			
AR46	Receiver Air Refueling Breakaway Procedures	P	P	P	
DP05	Instrument Departure	P			
GS10	Alert Start	P		P	
GS12	Instructional Techniques	P	P	P	P
GS14	Briefing/Control of Passenger				P
GS16	Pretakeoff Procedures				P
GS18	Post flight Procedures	P	P	P	P
GS20	Aircraft Systems and Equipment Operations	P	P	P	P
GS26	Checklist Procedures/Use	P	P	P	P
GS30	Alert Procedures	P	P	P	P

CODE	TRAINING EVENT	PILOT	NAV	FE	FA
GS70	Emergency Procedures	P	P	P	P
GS71	Forms				P
GS72	Menu Planning				P
LD01	Landing, Day	P		P	
LD02	Landing, Night	P			
LD10	Landing, Short Field	P			
LD11	Touch & Go Landing	P		P	
LD14	Landing, Reverse Thrust	P		P	
LD33	Approach/Landing -- Full Stop, Simulated 3 Engines	P		P	
LD41	Category II/IIIa Autoland	P		P	
ME19	Mission Planning /Briefing	P	P	P	P
ME20	Crew Coordination	P	P	P	P
ME30	Alert/Training Taxi	P	P	P	P
ME90	Rendezvous Procedures Exercise	P	P	P	P
ME91	Block Time Control Exercise	P	P		
NE01	Systems Navigation Leg		P		
NE11	General Navigation		P		
NE14	INS Continuous Update		P		
NE15	INS Bearing/Distance Update		P		
NE22	Continuous Three INS Mixing		P		
NE36	INS/FMS Operation		P		
ST00	Sortie	P	P	P	P
TO00	Takeoff	P		P	P
TO22	Climb Procedures	P	P	P	P
TO25	T/O Engine Failure After V1	P		P	
TO26	Departure (Monitored)		P		

Notes:

1. Instructor candidates who have previously completed and documented item AG10, Instructor Academic Training, for this or any other MAJCOM approved program need only accomplish that portion pertaining to regulations and manuals AG05.

Table 5.3. Instructor Upgrade Training Requirements ACS-R/ACS-D/CCO/SE/SHF/DTWO.

CODE	TRAINING EVENT	ALL
AA21	Instructor Qualification Evaluation	P
AG05	Reg/Dir Orientation	P
GS12	Instructor Technique	P
GS90	Brief/Critique	P
GS91	Demonstration/Performance Method	P
GS92	Lecture Method	P
GS93	Discussion Method	P
Note: It is highly desirable for instructor upgrade candidates to attend the ACC Flight Instructor Development Course prior to beginning any squadron level instructor upgrade program.		

5.3. Alert Aircraft Commander Qualification Training. All 1 ACCS pilots are initially qualified to serve as first pilots for National Airborne Operations Center (NAOC) alert missions. For all other 1 ACCS missions, pilots are initially certified to serve as aircraft commanders and as first pilots.

5.3.1. Prerequisites. Pilots should serve one year as a qualified first pilot (use IQT AFI 11-202V2 evaluation date to begin timing) before serving as an Alert Aircraft Commander. Training events leading to Alert Aircraft Commander certification may be accomplished prior to this anniversary.

5.3.2. Upgrade to Alert Aircraft Commander is not automatic. It is presumed that in one year a pilot will accumulate approximately 300 flying hours, accomplish 7 to 8 alert tours, and gain exposure to all the routine alert airfields in the continental United States. This level of experience is crucial for consideration for Alert Aircraft Commander qualification.

5.3.3. Procedures. Aircraft commanders will be administratively certified by the squadron commander to serve as an Alert Aircraft Commander and the documentation for this certification will be maintained in the individual's training folder.

5.3.3.1. The following events must be completed and documented under the supervision of an instructor to complete administrative certification as an Alert Aircraft Commander: GS09 Alert Simulator Profile, AG18 Alert Aircraft Commander Responsibilities, LD10 Short Field Landing, ME91 Block Time Control Exercise. An alert tour under the supervision of an instructor must also be accomplished.

5.4. Functional Check Flight (FCF) Crew Training. The 1 ACCS squadron commander will designate certain crewmembers, upon recommendation by current FCF crewmembers, as FCF qualified crewmembers. Consideration for FCF designation should only be given to the most experienced and most proficient crewmembers in the squadron. Evaluators and training flight instructors can serve as FCF crewmembers and should be given top consideration.

5.4.1. Qualification Criteria/Procedures:

5.4.1.1. Aircraft commanders -- Will be instructor or evaluator qualified and must satisfactorily perform at least one FCF under the supervision of another FCF qualified aircraft commander.

5.4.1.2. First pilots -- Will be highly experienced and proficient (preferably instructors but not mandatory). Must perform at least one FCF under the supervision of another FCF qualified air-

craft commander. Non-instructor FCF first pilots will not perform FCFs without a qualified FCF aircraft commander in the opposite seat.

5.4.1.3. Navigators -- Will be instructor or evaluator qualified and must satisfactorily perform at least one FCF under the supervision of another FCF qualified navigator.

5.4.1.4. Flight Engineers -- Will be instructor or evaluator qualified and must satisfactorily perform at least one FCF under the supervision of another FCF qualified flight engineer.

5.4.1.5. Flight Attendants -- Will be highly experienced and proficient (preferably instructors but not mandatory).

Chapter 6

NAVIGATOR TRAINING PROCEDURES

6.1. Scope. Navigation training procedures and standards for E-4B navigators.

6.2. Celestial Navigation Procedures:

6.2.1. Establish the navigation leg routing during mission planning. Base minimum navigation leg duration on the scheduled and available flight plan time. The intent is to fly the duration specified for the type of navigation leg being accomplished. Due to weather deviations, controller restrictions, adverse tailwind components, etc., the navigation leg may be terminated early to meet mission timing. In this case, credit will be awarded if minimum events are accomplished.

6.2.2. Establish control time and positions if required for type of navigation leg being flown. Alternate control time and positions may be used when in-flight replanning, controller restrictions, weather deviations or operational requirements prohibit reaching planned control time and positions.

6.2.3. All navigation training legs should adhere to planned course and airspeed except as noted above. Navigation leg requirements should not be accomplished during climbs, after takeoff, rendezvous, descent before landing, holding patterns, air refueling orbits, transition or landing. Navigation leg requirements, including checklist items, should be completed not later than 10 minutes prior to a rendezvous point, anchor point, Initial Approach Fix (IAF), beginning of a Standard Terminal Arrival (STAR), or planned starting point for an enroute descent.

6.2.4. Start and end navigation may be determined by any fixing/dead reckoning available. Base classification of the navigation leg encompassing both day and night celestial activity on the type of the majority of fixes/most probable points obtained. When no majority exists, classification will be based on the last fix/Most Probable Position (MPP) obtained.

6.2.5. Announce final Estimated Time of Arrival (ETA) prior to reaching termination point. ETAs may be revised any time to accommodate changes in ground speed. The navigation leg is considered complete after the termination fix has been taken and plotted.

6.2.6. Alteration or reworking of celestial or other data is not permitted after navigation leg is terminated. After it has been terminated, log or chart only alterations and entries for clarification, or log completion will be permitted. Alterations and entries may be made in flight or after landing, but will not be accomplished during the period of penetration to final landing.

6.3. Air Traffic Rules:

6.3.1. During all general navigation activity, attempt to maintain centerline at all times. Deviations from Air Route Traffic Control Center (ARTCC) approved routing will not exceed 10 Nautical Miles (4 Nautical Miles along airways) unless approved by ARTCC. See Flight Information Publications (FLIP), FAA Handbook 7110.65 and AFI 11-202V3, *General Flight Rules*, for additional requirements and restrictions.

6.4. Systems Navigation Leg:

6.4.1. This provides guidance and rules for systems navigation leg training.

6.4.2. Minimum duration: 30 minutes

6.4.3. Minimum Accomplishments:

6.4.3.1. Three celestial Lines of Position (LOP) will be obtained, and the resulting fix or averaged LOP evaluated against the Inertial Navigation System (INS).

6.4.3.2. Two radar fixes if available.

6.4.3.3. One INS aided inertial continuous update or INU manual update.

6.4.3.4. One INS/INU Bearing/Distance update.

6.4.3.5. One manual update (may be accomplished in conjunction when rating the celestial or radar positions).

6.4.3.6. One celestial heading check.

6.4.3.7. Demonstrate continuous three-INS-mixing or INU differential updating.

6.4.4. Procedures.

6.4.4.1. Steering will be through INS/FMS autopilot coupled.

6.4.4.2. The positions determined by radar, TACAN, VOR, FMS, or celestial fixing need not be used to direct the aircraft. They will be used to check the INS/FMS position in any mode of operation.

6.4.5. Authorized Aids.

6.4.5.1. Celestial information.

6.4.5.2. Radar.

6.4.5.3. TACAN, VOR, GPS/FMS

6.4.5.4. All modes of the INS/INU.

6.4.6. Accuracy Standards.

6.4.6.1. Maintain 100 percent of scored positions within 10 Nautical Miles of planned course.

6.4.6.2. Maximum allowable terminal fix: 10 Nautical Miles

Chapter 7

SIMULATOR TRAINING PROGRAM

7.1. Scope. This chapter applies to pilots and flight engineers. Use these guidelines to conduct an effective simulator training program. Adherence to these guidelines ensures subject material is employed in a realistic manner on a regular basis.

7.2. Concept of Training:

7.2.1. Effective use of the flight simulator along with other training devices greatly enhances flight training programs. Crewmembers attending simulator training must prepare for each mission with the same emphasis given to aircraft missions. Review the flight profile and study the applicable abnormal/emergency procedures. Precede each simulator mission with a comprehensive briefing. The information presented should reinforce mission tasks. Cover Crew Resource Management (CRM) techniques as well as all data required to complete the profile.

7.2.2. Stress realism in all phases of trainer operation. Use the training device as if it were the aircraft to the maximum extent reasonable to include proper operation of communication, personal, and emergency equipment. Emphasize and practice correct communications and instrument flight procedures. Include realistic navigational aid and flight instrumentation failures. Emphasize CRM during instrument penetration and approach to landing. Instructors must insure the simulator environment is as realistic as possible.

7.2.3. The basic content of each simulator mission is included in separate lesson outlines (para. 7.6). Accomplish malfunction and emergencies as outlined to insure maximum exposure to these areas/systems. Deviation from the lesson plan to meet specific training needs is encouraged since it enhances training. Satisfactorily complete simulator period 1 and simulator period 2 before advancing to simulator period 3.

7.2.4. Conduct the Cockpit Procedures Trainer (CPT) (GS51) prior to sim period 3. CPT training is designed as an open forum for the crewmember to tailor training to their own needs. Include review of checklist procedures with each aircraft system.

7.2.5. Accomplish CT requirements as allowed in **Table 4.3**.

7.2.6. Review lesson plans biannually.

7.3. Objectives:

7.3.1. Insure all flight crews maintain the proficiency required to safely operate the aircraft and effectively perform the assigned mission.

7.3.2. Provide realistic simulator in-flight mission training for E-4 crewmembers to include: abnormal and emergency procedures, normal procedures, crew coordination, system operation, instrument training, and SIOP scenario.

7.4. References. T.O. 1E-4B-1, Volume 1 & 2, *Flight Manual E-4B*, 1E-4B-1-1, Volume 3, *E-4B Performance Data Manual*, and AFM 11-217V1, *Instrument Flight Procedures*.

7.5. Instructional Materials. B-747-100/200/238/300 flight simulator with visual air refueling capability and a minimum of Phase C level FAA certification, B-747-100/200/238/300 cockpit procedural trainer, and aircraft system mock-ups.

7.6. Lesson Outlines:

7.6.1. Simulator Period 1:

7.6.1.1. Duration: 4 hours.

7.6.1.2. Pre-Mission Requirements. Review: Normal procedures, crew resource management (CRM), CAT II/IIIa procedures, instructor procedures and techniques, flight characteristics (stalls, steep turns) and engine failure takeoff continued emergency procedures.

7.6.1.3. Overview. Accomplish a training profile that includes normal operating procedures, instrument procedures including CATII/IIIa procedures, and emergency procedures relating to the takeoff phase.

7.6.1.4. Mission scenario:

7.6.1.4.1. Flight deck preflight.

7.6.1.4.2. Engine start and taxi procedures.

7.6.1.4.3. Normal Take-off.

7.6.1.4.4. Area departure.

7.6.1.4.5. Flight characteristics (steep turns, approaches to stalls)

7.6.1.4.5.1. Unusual attitude recognition and recovery

7.6.1.4.6. Instrument procedures:

7.6.1.4.6.1. Holding.

7.6.1.4.6.2. ILS

7.6.1.4.6.3. NDB

7.6.1.4.7. Rejected landing.

7.6.1.4.8. Missed Approach.

7.6.1.4.9. Autoland.

7.6.1.4.10. Takeoff emergencies:

7.6.1.4.10.1. Rejected takeoff.

7.6.1.4.10.2. Engine failure after V1.

7.6.1.4.10.3. Three engine approaches.

7.6.2. Simulator Period 2:

7.6.2.1. Duration: 4 hours.

7.6.2.2. Pre-Mission Requirements. Review: Normal procedures, CRM, emergency and abnormal procedures, two-engine approach and landing procedures, and aircraft systems.

7.6.2.3. Overview. Accomplish a training profile that includes normal operating procedures, various aircraft system malfunctions, emergency procedures and two-engine approach and landing procedures.

7.6.2.4. Mission scenario:

7.6.2.4.1. Flight deck preflight

7.6.2.4.2. Engine start (abnormal), alternate start procedures

7.6.2.4.3. Takeoff and departure at maximum gross weight

7.6.2.4.4. Aircraft system malfunctions:

7.6.2.4.4.1. Electrical fire/failure

7.6.2.4.4.2. Hydraulic failures

7.6.2.4.4.3. Landing gear abnormalities

7.6.2.4.4.4. Flap malfunction

7.6.2.4.4.5. Flight control malfunctions

7.6.2.4.4.6. Brake failure/fire

7.6.2.4.4.7. Pressurization failure (Rapid Decompression)

7.6.2.4.4.8. Normal landing

7.6.2.4.4.9. Takeoff emergencies:

7.6.2.4.4.9.1. Rejected takeoff (MGW)

7.6.2.4.4.9.2. MGW takeoff engine failure after V1

7.6.2.4.4.9.3. Fuel jettison

7.6.2.4.4.9.4. Engine failure/fire in-flight

7.6.2.4.4.9.5. Two-engine approach/landing

7.6.2.4.4.9.6. Aircraft evacuation.

7.6.3. Simulator Period 3:

7.6.3.1. Duration: 4 hours.

7.6.3.2. Pre-Mission Requirements. Review: Alert Procedures, CRM, emergency and abnormal procedures, tactical doctrine, SIOP procedures, and air refueling procedures.

7.6.3.3. Overview: The crew will accomplish a simulated SIOP mission operating in an Eastern United States locale.

7.6.3.4. Mission Scenario:

7.6.3.4.1. Alert Quick start

7.6.3.4.2. Abnormal Engine start

7.6.3.4.3. Three engine takeoff

7.6.3.4.4. Three engine landing at weights above normal

7.6.3.4.5. Alert routing scenario

7.6.3.4.6. Air Refueling

7.6.4. Cockpit Procedure Trainer Periods (GS51):

7.6.4.1. Duration: 2 hours.

7.6.4.2. Overview: CPT training provides systems and procedural training for pilots and flight engineers.

7.6.4.3. System Topics:

7.6.4.3.1. Electrical System:

7.6.4.3.1.1. Electrical Smoke or Fire

7.6.4.3.1.2. High or Rising IDG Oil Temperature

7.6.4.3.1.3. IDG Oil Low Pressure Light On

7.6.4.3.1.4. 1, 2, or 3 Generators in One System Inoperative

7.6.4.3.1.5. Loss of All Generators

7.6.4.3.1.6. Generator Drive (IDG) Disconnect

7.6.4.3.1.7. Unbalanced or Oscillating KW/KVAR Indications

7.6.4.3.1.8. Generator Circuit Breaker (GCB) Open Light On and Field Off Light Off

7.6.4.3.1.9. Failed T/R Unit, DC Ammeter Reads Zero Generator

7.6.4.3.1.10. Circuit Breaker (GCB) Open Light and Field Off Light Off

7.6.4.3.1.11. Essential Bus Off Light On

7.6.4.3.1.12. Bus Tie Open Light On

7.6.4.3.1.13. Split System Breaker Closed

7.6.4.3.1.14. Locate 1 or 2 Open C/Bs Using T.O. 1E-4B-1

7.6.4.3.2. Air Conditioning/Pneumatics:

7.6.4.3.2.1. Air Conditioning Smoke

7.6.4.3.2.2. Duct Pressure Low

7.6.4.3.2.3. Wing Overheat

7.6.4.3.2.4. Pack(s) Trip

7.6.4.3.2.5. Bleed Air Overheat Light On

7.6.4.3.2.6. High Stage Bleed Air Valve Failure

7.6.4.3.2.7. Manual Pack Operation

7.6.4.3.2.8. Bypass, Inlet or Exit Doors Not in Preposition

7.6.4.3.2.9. Zone Overheat Light On

7.6.4.3.2.10. Trim Air Valve (Master) Closed

7.6.4.3.3. Pressurization:

- 7.6.4.3.3.1. Rapid Depressurization
- 7.6.4.3.3.2. Auto Fail Light On
- 7.6.4.3.3.3. Pressurization System Manual Operation
- 7.6.4.3.3.4. Pressurization System Partial Manual Operation
- 7.6.4.3.3.5. Unscheduled Cabin Pressure Change
- 7.6.4.3.3.6. Automatic Pressurization Electrical Power Interruption

7.6.4.3.4. Equipment Cooling:

- 7.6.4.3.4.1. Loss of Flight Avionics Cooling
- 7.6.4.3.4.2. Equipment Cooling Smoke Light On

7.6.4.3.5. Hydraulics:

- 7.6.4.3.5.1. Hydraulic Systems Leak or Loss
- 7.6.4.3.5.2. Engine Driven Hydraulic Pump Low Pressure Light On
- 7.6.4.3.5.3. Hydraulic System Overheat Light On
- 7.6.4.3.5.4. Air Driven Hydraulic Pump Low Pressure Light On (With ADP Switch in auto and Pneumatic Manifold Pressurized)

7.6.4.3.6. Engines:

- 7.6.4.3.6.1. Engine Fire, Severe Damage or Separation
- 7.6.4.3.6.2. Engine Failure and Shutdown
- 7.6.4.3.6.3. In-flight Reverse Thrust Engine Restart In-flight
- 7.6.4.3.6.4. Engines Stuck in Reverse During Gnd Ops
- 7.6.4.3.6.5. Starter Valve Fails to Close
- 7.6.4.3.6.6. Start Valve Open Light On In-flight
- 7.6.4.3.6.7. Engine Overtemp on the Ground Other Than Start
- 7.6.4.3.6.8. Tailpipe Fire
- 7.6.4.3.6.9. Engine Overlimits
- 7.6.4.3.6.10. Oil Filter Bypass Light On
- 7.6.4.3.6.11. Engine Stalls
- 7.6.4.3.6.12. High Engine Vibration
- 7.6.4.3.6.13. Fuel Filter Bypass Light On
- 7.6.4.3.6.14. Ground Idle Light On In-flight
- 7.6.4.3.6.15. Multiple Engine Loss

7.6.4.3.7. Fire Protection Systems

- 7.6.4.3.7.1. Engine Nacelle Overheat
- 7.6.4.3.7.2. Fire Detection Light On
- 7.6.4.3.7.3. APU Fire Detector Fault Light On
- 7.6.4.3.7.4. Wheel Well Fire
- 7.6.4.3.8. Landing Gear:
 - 7.6.4.3.8.1. Partial Main Gear Landing
 - 7.6.4.3.8.2. Alternate Landing Gear Extension
 - 7.6.4.3.8.3. Gear Not Centered Light On
 - 7.6.4.3.8.4. Landing Gear Lever Will Not Move To Up Position
 - 7.6.4.3.8.5. Gear Door Open Light On
 - 7.6.4.3.8.6. Anti-skid Hydraulic Light On
 - 7.6.4.3.8.7. Anti-skid Grd Mode Light Does Not Come On During Ground Test
 - 7.6.4.3.8.8. Ground Safety Relay Light On In-flight
 - 7.6.4.3.8.9. Red Gear Light Remains On (Throttles(s) not at Idle Setting)
 - 7.6.4.3.8.10. Anti-skid Light On
 - 7.6.4.3.8.11. Auto Brake Light On
- 7.6.4.3.9. Flight Controls:
 - 7.6.4.3.9.1. Unscheduled Stabilizer Trim
 - 7.6.4.3.9.2. Asymmetrical Trailing Edge Flaps
 - 7.6.4.3.9.3. Split Trailing Edge Flaps
 - 7.6.4.3.9.4. One or More Leading Edge Flaps Inoperative
 - 7.6.4.3.9.5. Alternate Leading Edge Flap Operation
 - 7.6.4.3.9.6. Alternate Trailing Edge Flap Operation
- 7.6.4.3.10. Automatic Flight:
 - 7.6.4.3.10.1. Auto Stab Trim (A or B) Light On
 - 7.6.4.3.10.2. Auto Throttle Light On
 - 7.6.4.3.10.3. Yaw Damper Light On (Upper or Lower)
- 7.6.4.3.11. Navigation:
 - 7.6.4.3.11.1. INS Warn Light On
 - 7.6.4.3.11.2. INS Warn Light On (No Action or Malfunction Code Displayed)
 - 7.6.4.3.11.3. Both (Pilot and Copilot) Central Instrument Warn Lights Flashing
 - 7.6.4.3.11.4. One (Pilot or Copilot) Central Instrument Warn Light Flashing

- 7.6.4.3.11.5. Warning Flags (No CIWS Lights)
- 7.6.4.3.12. Engine Starting Malfunctions:
 - 7.6.4.3.12.1. Hot Start
 - 7.6.4.3.12.2. Hung Start
 - 7.6.4.3.12.3. No EGT Rise
 - 7.6.4.3.12.4. N2 Acceleration is Sluggish
 - 7.6.4.3.12.5. EGT Climbing Through 750C
 - 7.6.4.3.12.6. Dense Fuel Fogging Prior to Start Lever Movement
 - 7.6.4.3.12.7. Instantaneous Light Off
 - 7.6.4.3.12.8. Initial Fuel Flow Greater than 700 lbs/hr
 - 7.6.4.3.12.9. Abnormal Oil Pressure After 30 Seconds After Start Switch On
 - 7.6.4.3.12.10. No Indication of N1 Rotation

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Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

AFPD 11-2, *Aircraft Rules and Procedures*

Abbreviations and Acronyms

- | **ACC/XO**—Air Combat Command Director of Aerospace Operations
- ACS**—Airborne Communications Specialist
- ACS-D**—Airborne Communications Specialist-Data
- ACS-R**—Airborne Communications Specialist-Radio
- ACS-S**—Airborne Communications Specialist-Semi-Automatic Switching System
- | **ACS-T**—Airborne Communications Specialist-Technical Control
- AFORMS**—Air Force Operations Resource Management System
- ARTCC**—Air Route Traffic Control Center
- BMC**—Basic Mission Capable
- BAQ**—Basic Aircraft Qualification
- CCO**—Communications Control Officer
- COMM**—Communications
- CMR**—Combat Mission Ready
- CRM**—Cockpit/Crew Resource Management
- CT**—Continuation Training (Phase III)
- DOT**—Deputy Operations for Training
- DNIF**—Duty Not Including Flying
- DTWO**—Dual Trailing Wire Operator
- E**—Experienced
- FCF**—Functional Check Flight
- | **FA**—Flight Attendant
- FE**—Flight Engineer
- HELO**—Helicopter
- HHD**—Higher Headquarters Directed
- I**—Inexperienced
- IAW**—In Accordance With

INS—Inertial Navigation System

INU—Inertial Navigation Unit (for FMS/GPS mod aircraft)

IP/IN/IFE/IFA—Instructor Pilot/Navigator/Flight Engineer/Flight Attendant

IQT—Initial Qualification Training (Phase I)

MAJCOM—Major Command

MAR—Mission Accomplishment Report

MPS—Message Processing System

MQT—Mission Qualification Training (Phase II)

N—Navigator

NAOC—National Airborne Operations Center

NMR—Non-mission Ready

| **NPES**—Nuclear Planning and Execution System

OPS—Operations

P—Pilot

RAP—Ready Aircrew Program

RM—Radio Maintenance

| **RPI**—Rated Position Indicator

SASS—Semi-Automatic Switching System

SHF—Super High Frequency

SE—System Engineer

TAR—Training Accomplishment Report

TC—Tech Controller

TX—Transition Training (Phase I)

UQ—Unqualified

| **XOF**—Flight Operations Division

| **XOFR**—Flight Operations Division, Reconnaissance Branch

Terms

Academic Training—This training includes classroom, Computer Based Instruction (CBI), and Aircrew Training Devices (ATD) related to aircraft systems and operation, flight characteristics and techniques, performance, normal and emergency procedures, and safety of flight items. Academic courses prepare crew members for flight training and are normally completed before flight training.

Aircraft Commander—(DoD, NATO) The aircrew member designated by competent authority as being in command of an aircraft and responsible for its safe operation and accomplishment of the assigned

mission.

Aircrew—The complete complement of flight and mission crew personnel required to fly an operational mission.

Alert Aircraft Commander—An Aircraft Commander who is certified to serve as “Pilot in Command” for NAOC alert.

Continuation Training—Training required by qualified personnel to maintain their assigned level of proficiency.

Critical Phases of Flight—Defined as takeoff, air refueling, any type of landing and any other maneuver listed in this manual requiring instructor pilot supervision. Air refueling rendezvous is not considered a critical phase of flight.

Currency Events—Those events which must be accomplished at prescribed intervals to maintain the proficiency required to safely operate the aircraft or perform in-flight duties. Establishes the maximum amount of time, which may elapse without performing the event properly/safely.

Flight Crew—The pilots, navigator, flight engineer, and flight attendant (P, N, FE, and FA).

Instructor—An individual who has been trained to instruct and is designated by the squadron commander.

Mission Accomplishment Report—A computer generated product used for recording continuation training activity.

Mission Crew—Includes these crew positions: CCO, ACS-R, ACS-D, ACS-S, ACS-T, SHF, and DTWO.

Non-mission Ready—An individual who is not current or qualified in the aircraft, or has not completed the required continuation training, or is not certified to perform the unit mission.

Proficient—Individual can do and show others how to do the behavior in an activity at the minimum acceptable levels of speed, accuracy, and safety without assistance.

Reporting Status—A readiness indicator, which relates completion of, required training to the Status of Resources and Training reporting. See AFI 10-201, *Status of Resources and Training System*.

Supervised Status—A status assigned to an individual who is; delinquent in a currency event, qualification level III IAW AFI 11-202V2, or has been so designated by the squadron commander. An individual in this status must be supervised by an instructor of like specialty while performing the non-current/unqualified event. The individual will be considered NMR (except for ME21 and LD11).

System Engineer—An individual who is qualified and maintains currency as a TC-1, TC-2 and RM-2. They also have completed an initial Systems Engineer evaluation.

Upgrade Training—Training conducted to qualify a crewmember as an instructor. Flight examiner upgrade will be IAW AFI 11-202V2. (Could also mean alert aircraft commander or special mission upgrade.)

Attachment 2

TRAINING EVENT DESCRIPTION TABLES

Table A2.1. "A" Events.

AA21	AFI 11-202V2, Qualification Evaluation. Required as a course completion item for all initial/mission qualification and requalification training. Partial checks are required in conjunction with difference training when difference qualification involves any new area in which not currently qualified.	
AG01	E-4 Systems Course. This course is designed to introduce the student to the various aircraft systems of the E-4. Credit will not be awarded until all course requirements are satisfied. The course will consist of the topics depicted below for each crew position.	
PILOTS/FLIGHT ENGINEERS		FLIGHT ATTENDANTS
Aircraft General		Aircraft General
Engines/APU/Fire Protection		Air Stair Operation
Fuel/Air Refueling		Emergency Escape Systems & Procedures
Electrical System		Alert Procedures
Hydraulics/Landing Gear/Brakes		Associated Directives
Flight Controls		Emergency Equipment/Procedures
Air Cond./Press/Equipment Cooling		Mission Planning
Ice & Rain Protection		Food handlers
Communications		Communications
Automatic Flight Control System		Galley Operations
Navigation Systems		CPR Training
Flight Instruments		Commercial Flight Academy
Mission Equipment		
Weight & Balance/Performance		ACS-S/ACS-R/ACS-D/ACS-T/ CCO/DTWO/SHF
NAVIGATORS		Aircraft General/Technical Orders/Flight Manuals
Air Refueling Rendezvous Procedures		Aircraft Interphone Systems
Aircraft General		Communications Equipment
Communications and Avionics Equipment		Emergency Equipment & Procedures
Emergency Escape Systems & Procedures		Emergency Escape Systems & Procedures
Inertial Navigation Systems		Emergency Procedures Communications Equipment
Mission Planning (Comp Flight Planning)		
Normal Procedures		
Radar		
Timing Control		
AG05	Regulation and Directive Orientation. Introduce crewmembers to the command/wing specific regulations and directives associated with associated training.	
AG10	Instructor Academic Training. MAJCOM approved instructor course, for those who have not attended a MAJCOM instructor course. Those not required by this manual to attend this course, may substitute in unit academic training.	
AG18	Aircraft Commander's Responsibilities. Pilots must receive a comprehensive briefing on their responsibilities while performing aircraft commander duties. This briefing will include, but not limited to, command and control, chain of command, ICAO procedures, foreign clearance guide, billeting, security, aircraft performance and limitations, crew rest and crew duty day.	

AG19	Alert Aircraft Commander's Responsibilities. Pilots must receive a comprehensive briefing on their responsibilities while performing alert aircraft commander duties. This briefing will include but not be limited to alert fuel loads, minimum onboard alert rations, alert chain of command and alert weather minimums and guidelines.
AG20	ACS-S. Written proficiency training exams or hands on training. Should consist of Operating Procedures, Mission Equipment, Alert and Emergency Procedures.
AG21	ACS-R. Written proficiency training exams or hands on training for continuation training. Should consist of Operating Procedures, Mission Equipment, Emergency Equipment, and Alert Procedures.
AG22	ACS-D/A, ACS-D/B. Written proficiency training exams or hands on training for continuation training. Should consist of Operating Procedures, Mission Equipment, Emergency Equipment and Alert Procedures.
AG23	Instructor. Written proficiency training exams or hands on training for continuation training. Should consist of flight instructor, principles of instruction, student motivation, preparing to teach, instructional techniques, instructional methods, training aids, student/instructor relationships, evaluation procedures, evaluation techniques, regulations and manuals, instructor survival, and training records.
AG24	ACS-T/DTWO. Written proficiency training exams or hands on training for continuation training. Should consist of Operating Procedures, Mission Equipment, Emergency Equipment and Alert Procedures.
AG25	SHF. Written proficiency training exams or hands on training for continuation training. Should consist of Operating Procedures, Mission Equipment, Emergency Equipment and Alert Procedures.
AP01	Precision Approach. Credit when accomplishing any precision approach as defined in AFM 11-217, Instrument Flying. Credit when accomplishing AP20, AP22, or AP40.
AP04	Non-precision Approach. Credit when accomplishing any nonprecision approach as defined in AFM 11-217, Instrument Flying.
AP09	Enroute Descent. Accomplished in accordance with the aircraft flight manual and AFM 11-217, Instrument Flying. ILS Approach. Credit when accomplishing AP22 or LD41. Credit AP01 when accomplishing AP20.
AP20	
AP22	Category II ILS (Manual). Accomplished in accordance with the aircraft flight manual and AFM 11-217. Credit AP20 and AP01 when accomplishing AP22.
AP26	Missed Approach (Manual). Accomplished in accordance with the aircraft flight manual and AFM 11-217, Instrument Flying.
AP27	Missed Approach (Auto). For Initial/Requalification, this event will not be accomplished until a briefing has been conducted by an instructor pilot on power requirements and programmed aircraft attitude.
AP30	Circling Approach. Credit when accomplishing any circling approach as defined in AFM 11-217, Instrument Flying. Credit AP04 when accomplishing AP30.
AP31	NDB Approach. Credit when accomplishing any Non-Directional Beacon approach as defined in AFM 11-217, Instrument Flying. Credit AP04 when accomplishing AP31.
AP39	Instrument Approach/Missed Approach Simulated Engine-Out. Accomplished in accordance with the aircraft flight manual and AFM 11-217, Instrument Flying. Credit AP26 when accomplishing AP39.
AP40	PAR Approach. Credit when accomplishing any PAR approach as defined in AFM 11-217, Instrument Flying. Credit AP01 when accomplishing AP40.
AP42	Instrument Approach. Credit when accomplishing any approach as defined in AFM 11-217, Instrument Flying. Credit when accomplishing AP01 or AP04.
AP51	Holding Pattern. Credit when accomplishing any holding pattern as defined in AFM 11-217, Instrument Flying.
AP56	Approach (Monitored). Includes all activity from departing cruise altitude for initial penetration or letdown to completion of descent and landing.
AP68	Visual Pattern. Approach to a runway without the aid of radio navigational aids or controller guidance.

AP70	Proficiency Exercise (Pilot and Flight Engineer). 1.5 hour block of transition, instrument and emergency procedures practice. Except for initial departure, once the block commences, do not disrupt for any other type of training (FE's exempt). Pilots must log IP or primary time for the entire block to award credit. Aircraft commanders must be supervised by an IP. IP's must accomplish 50 percent of their AP70's under the supervision of another IP (See AP80). Flight engineers will perform crew specialty functions required during this exercise. Accomplish the following: Instrument requirements: Instrument Departure Penetration (Enroute) Missed Approach Visual pattern and landing (weather permitting). Emergency Procedures. Accomplish as many practice emergency procedures as possible in the time and conditions permitting. Place particular emphasis on simulated systems malfunctions and simulated engine out operation. These may include but are not limited to: Simulated Engine Failure. Takeoff Continued. Approach and Go-Around, Simulated 3-engines Simulated 3-engine landing Alternate Gear and Flap Lowering Credit when accomplishing AP80
AP73	Global Positioning System (GPS) Approach. Credit when accomplishing any GPS approach as defined in AFM 11-217, Instrument Flying.
AP80	IP supervised IP Proficiency Exercise. An IP accomplishing an AP70 under the supervision of another IP (including contract instructors) will log this event. Dual log with AP70.
AP90	Category II/IIIa Certification. Must log AP22, AP27, GS53, and LD41 to get credit for this event. Initial certification accomplished in conjunction with AA21 (AFI 11-202V2, qualification evaluation). During initial mission qualification, requalification training, or continuation training, log this event to signify satisfactory demonstration of CAT II/IIIa procedures to an instructor.
AR14	Receiver Air Refueling, Tanker Autopilot Off. All axes of the tanker autopilot must be disengaged to satisfy receiver training requirements. Receiver pilots must practice contacts for a minimum of five minutes.
AR15	Receiver Rendezvous. Credit when accomplishing AR27 or AR32. (pilot must be pilot flying in order to log).
AR24	Radio Silent, Visual Signals. Accomplish IAW air refueling technical order 1-1C-1-28.
AR25	Receiver Air Refueling. Consists of air refueling including closure and contacts. The receiver pilot must accomplish ten minutes toggles engaged time and attempt to onload some amount of fuel. Toggles engaged time does not apply during tanker autopilot off refuelings or during higher headquarters missions. The flight engineer and the flight attendant must complete all air refueling checklists for credit.
AR27	Point Parallel Rendezvous. A point parallel rendezvous using radar beacon, differential TACAN or computer DME, timing, DF steer, ATC/GCI assistance, or any combination of these. Dual log with AR15. Receiver Rendezvous Over-run Procedures. Accomplish IAW air refueling technical order 1-1C-1-28.
AR30	
AR32	Enroute Rendezvous. Procedure used when join-up is to be accomplished at an RZ PT at a scheduled time. Timing may be accomplished using ground speed control, orbit delay, or timing triangle. Dual log with AR15.
AR39	Receiver Air Refueling Envelope Demonstration. Demonstrate the aerial refueling envelope in lateral, vertical, and longitudinal axes.
AR44	Receiver Air Refueling Night. Same as AR25 except it's accomplished between sunset and sunrise. Credit AR25 when accomplishing AR44.
AR46	Receiver Air Refueling Breakaway Procedures. Pilots must demonstrate proficiency in executing breakaway during air refueling. Navigator and flight engineer should be able to describe circumstances and procedures for requesting a breakaway.

Table A2.2. "CE" Events.

CE01*	Console Equipment/Controls. Consists of all equipment, consoles, and controls that are a part of the noted system or are used in conjunction with the noted system.
CE02*	Internal Communications Systems. This is an instructor led demonstration and discussion of operations and related equipment to all interphone systems on aircraft.

CE03*	Electronic Switching System. A discussion/demonstration of all associated equipment to include function, operation, and malfunction analysis.
CE04*	UHF Command Radio System. An instructor guided discussion of the UHF Command Radio equipment locations, controls, and operation.
CE05*	Call Processing. An instructor demonstration and student performance on all possible incoming and out going calls.
CE06*	UHF Satellite Voice Radio System. A discussion of the UHF satellite voice system, equipment location and operation.
CE07*	HF Communication System. A discussion of HF radio control heads, antenna locations, and HF system operations.
CE08*	MF Radio. A discussion of the purpose, control head, and system operation.
CE09*	VLF/LF Communication System. A discussion/overview for system familiarization.
CE10*	UHF Networks. A discussion of all UHF networks associated with the radio operators normal procedures.
CE11*	Special User Systems. A discussion to consist of all related regulations, procedures & associated equipment.
CE12*	Secure Voice Systems. A discussion/demonstration of the secure voice panels, secure telephones, and all other associated secure voice equipment.
CE13*	Message Processor System. A discussion/demonstration of all associated equipment to include function, operation, and malfunction analysis.
CE14**	Defense Satellite Communications System Electronic Counter-Countermeasure (DSCS ECCM) Networks. A discussion of all related regulations, procedures & equipment.
CE15**	Missile Warning Teletype (MWTY). A discussion of all related regulation, procedures & equipment.
CE16**	Single Channel transponder (SCT) Network. A discussion of all related regulations, procedures & equipment.
CE17**	HF Networks. Discussion of HF networks associated with the operator's normal & special operations.
CE18**	HHD Procedures. Discussion of procedures, regulations & equipment involved with these types of missions.
CE19**	UHF Satcom (AFSAT). A discussion of all procedures & associated equipment.
CE20**	Secure Data Circuits. A discussion of all procedures & regulations associated with operating secure data nets.
CE21**	MPS Procedures. A discussion of all procedures & associated equipment.
CE23**	UHF DAMA System. A discussion of all procedures & regulations associated with operation nets and screen configurations.
CE24**	EHF System. A discussion of all procedures & associated equipment.
CE25**	EHF Net Procedures. A discussion of all procedures & regulations associated with operationing operational nets and configurations.
CE27**	Force Report Back Procedures. Procedures, regulations and definitions associated with the ACS-R, ACS-D, & CCO normal procedures.
CE28**	Encryption/Decryption/Authentication. An instructor led demonstration and performance of all related documents and equipment.
CE29**	Operational Procedures. A discussion of all daily and special procedures associated with the noted system.
CE30**	EAM Procedures. A discussion of transmit, receive, and correction procedures for all types of Emergency Action Messages.
CE32**	Radio. Should consist of the following as required by mission/sortie profile: CE01, CE02 CE04, CE06, CE07, CE08, CE10, CE11, CE12, CE17, CE18, CE27, CE28, CE29, CE30, CE109, ST00, ME19, GS26, ME20, GS37, GS38, AA21.
CE31**	SASS. Should consist of the following as required by mission/sortie profile: CE01, CE02, CE05, CE10, CE11, CE29, CE30, ST00, ME19, GS26, ME20, GS37, AA21, and GS38.

CE33**	Low Speed. Should consist of the following as required by mission/sortie profile: CE01, CE02, CE14, CE15, CE20, CE27, CE28, CE29, CE30, GS26, GS37, GS38, ME19, ME20, ST00, AA21.
CE34**	AUTODIN. Should consist of the following as required by mission/sortie profile: CE01, CE02, CE16, CE21, CE28, CE29, GS30, ST00, ME19, GS26, ME20, AG05, AA21, GS37, and GS38.
CE35**	MILSTAR. Should consist of the following as required by mission/sortie profile: CE01, CE02, CE19, CE23, CE24, CE25, CE27, CE28, CE29, CE30, ST00, GS26, ME20, AG05, AA21, GS37, and GS38.
CE36**	LF/VLF. Should consist of the following as required by mission/sortie profile: CE01, CE02, CE21, CE27, CE28, CE29, CE30, ST00, ME19, GS26, ME20, AG05, AA21, GS37, and GS38.
CE37**	VLF PA-C/DTWA Operations. A discussion/demonstration of all duties associated with VLF power amplifier and wire operations.
CE38**	Radio Maintenance One. Assigned to this position and performed associated duties.
CE39	Radio Maintenance Two. Assigned to this position and performed associated duties.
CE40	VLF PA-C Operations (RM-1). Operate PA-C on the dual trailing wires or dummy load.
CE41	Crypto/Teletype. A discussion/demonstration of all associated equipment to include function, operation, and malfunction analysis.
CE42	SASS. Assigned to this position and performed associated duties.
CE43	Technical Control One. Assigned to this position and performed associated duties.
CE44	Technical Control Two. Assigned to this position and performed associated duties.
CE45	Airborne Performance Monitor. A discussion/demonstration of all associated equipment to include function, operation, and malfunction analysis.
CE46	Radio. Assigned to this position and performed associated duties.
CE47	Milstar. Assigned to this position and performed associated duties.
CE48	Autodin. Assigned to this position and performed associated duties.
CE49	Lowspeed. Assigned to this position and performed associated duties.
CE50	VLF/LF. Assigned to this position and performed associated duties.
CE51	SHF Operator/Maintenance. Assigned to this position and performed associated duties.
CE52	Message Processing System. Performed associated duties.
CE59	TWA Cycle. Consists of an extension and retraction of the trailing wire antenna, flight crew coordination, recording of position and completion of all log entries required for submission of the mission report.
CE87	Dual Trailing Wire Operations. Assigned to this position and performed associated duties.
CE90	TC-1 Console. A discussion/demonstration of all associated equipment to include function, operation, and malfunction analysis.
CE91	Cooling Air. A discussion/demonstration of all associated equipment to include function and operation.
CE92	Cooling Liquid. A discussion/demonstration of all associated equipment to include function and operation.
CE93	Electrical Systems – AC. A discussion/demonstration of all associated equipment to include function and operation.
CE94	Electrical Systems – DC. A discussion/demonstration of all associated equipment to include function and operation.
CE96	TC-2 Console. A discussion/demonstration of all associated equipment to include function, operation, and malfunction analysis.
CE97	MIB Knowledge. A discussion/demonstration of all associated knowledge items.
CE98	Ground Entry Point Knowledge. A discussion/demonstration of all GEP knowledge objectives.
CE100	Patch and Test Facility. A discussion/demonstration of all associated equipment to include function, operation, and malfunction analysis.
CE101	Circuit Config./Operations. A discussion/demonstration of all configurations and operations of circuits for the associated position.

CE102	CAPS. A discussion/demonstration of all associated equipment to include function, operation, and malfunction analysis.
CE103	Receiver/Transmitter Group. A discussion/demonstration of all associated equipment to include function, operation, and malfunction analysis.
CE104	AN/USC-28. A discussion/demonstration of all associated equipment to include function, operation, and malfunction analysis.
CE105	Single Channel Transponder. A discussion/demonstration of all associated equipment to include function, operation, and malfunction analysis.
CE106	SHF Console. A discussion/demonstration of all associated equipment to include function, operation, and malfunction analysis.
CE108	FDMA. A discussion/demonstration of all associated equipment to include function, operation, and malfunction analysis.
CE109	INMARSAT. A discussion/demonstration of all associated equipment to include function, operation, and malfunction analysis.
CE110	Multiplex System. A discussion/demonstration of all associated equipment to include function, operation, and malfunction analysis.
CE111	UHF/FDM. A discussion/demonstration of all associated equipment to include function, operation, and malfunction analysis.
CE112	Misc. Electronics. A discussion/demonstration of all associated equipment to include function, operation, and malfunction analysis.
CE115	Automatic Switchboard. A discussion/demonstration of all associated equipment to include function, operation, and malfunction analysis.
CE116	Tape Recorder System. A discussion/demonstration of all associated equipment to include function, operation, and malfunction analysis.
CE118	CPI/Voice Recorder. A discussion/demonstration of all associated equipment to include function, operation, and malfunction analysis.
CE119	VHF Command Radio System. A discussion/demonstration of all associated equipment to include function, operation, and malfunction analysis.
CE120	Weather Radar/Rend. Beacon. A discussion/demonstration of all associated equipment to include function, operation, and malfunction analysis.
CE121	LRRA. A discussion/demonstration of all associated equipment to include function, operation, and malfunction analysis.
CE122	TACAN. A discussion/demonstration of all associated equipment to include function, operation, and malfunction analysis.
CE123	IFF. A discussion/demonstration of all associated equipment to include function, operation, and malfunction analysis.
CE124	GPS. A discussion/demonstration of all associated equipment to include function, operation, and malfunction analysis.
CE125	VOR/ILS/Marker Beacon. A discussion/demonstration of all associated equipment to include function, operation, and malfunction analysis.
CE127	DTWA Controls and Indicators. A discussion/demonstration of all associated equipment to include function, operation, and malfunction analysis.
CE128	DTWA Modes of Operation. A discussion/demonstration of all DTWA modes of operations.
CE129	Antenna Pointing Group. A discussion/demonstration of all associated equipment to include function, operation, and malfunction analysis.
CE130	Nuclear Planning and Execution System. A discussion/demonstration of all associated equipment.

CE131	Digital Wall Clock System. A discussion/demonstration of all associated equipment to include function, operation, and malfunction analysis.
CE132	Ground Line Facilities. A discussion/demonstration of all associated equipment to include function, operation, and malfunction analysis.
CE133	MILSTAR. A discussion/demonstration of all associated equipment to include function, operation, and malfunction analysis.
*	CE01 through CE13. Reference T.O. IE-4B-43-1-1 and T.O. IE-4B-43-2-1.
**	CE14 through CE38. Reference as applicable. DOD, JCS, NAOC, USAF, MAJCOM, and local directives, Allied Communication Publications (ACPs), Joint Army, Navy, Air Force Publications (JANAPS), Operations Orders (OPORDs), Defense Satellite Communications Systems Operating Instruction (DOIs), KAOs, Technical Orders/Manuals, Crew member Aids (AAs), and Forms.

Table A2.3. "DP" Events.

DP05	Instrument departure. Creditable for either radar vector or SID departure, under all meteorological conditions
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Table A2.4. "G" Events.

GA03	Anti-Hijacking Procedures. Conduct IAW AFI 13-207, Preventing and Resisting Aircraft Piracy (High-Jacking). Must be completed prior to first flight.
GA13	COMSEC. Accomplished by 1ACCS Communication COMSEC office. A TOP SECRET/SBI clearance is required before this can be accomplished.
GA23	CRM. Contractor provided Cockpit Resource Management training for P/N/FE/FA.
GA48	Cardiopulmonary Resuscitation Training (CPR).
GS05	Food Handlers. Emphasis will be on E-4 procedures.
GS09	Simulator 1. The crew will accomplish a training profile that includes normal operating procedures, instrument procedures including CATII/IIIa operations, and emergency procedures relating to the takeoff phase.
	Simulator 2. The crew will accomplish a training profile that includes normal operating procedures, various aircraft system malfunctions, emergency procedures and two-engine approach /landing procedures.
	Simulator 3. The crew will accomplish a simulated SIOP mission operating in an Eastern United States locale.
Note. Simulator Training Credit for each event is the same, however, 3 periods of 4 hours each for a total of twelve hours of contract simulator training per training period (semiannual) are required for each pilot and flight engineer. Refer to Chapter 7 for lesson outlines.	
GS10	Alert Start Procedures. Accomplished in aircraft.
GS12	Instructional Techniques. Student instructor presents and demonstrates all phases of ground and flight activity. Includes technical data knowledge, applicable procedures, and their application.
GS14	Briefing and Control of Passengers. Demonstration of proficiency in knowledge of passenger briefing and control. Areas must include applicable operations manual and directive restrictions.
GS16	Pre-takeoff Procedures. Demonstration of appropriate pre-flight procedures to include acceptance of aircraft from maintenance or off going crew, pre-flight and briefings.
GS18	Post-flight Procedures. Demonstration of appropriate post-flight procedures to include transfer of aircraft to maintenance or oncoming crew, aircraft maintenance form annotations, and mission paperwork.
GS20	Aircraft Systems and Equipment Operation. Crewmembers must demonstrate proficiency in: Normal and emergency procedure knowledge of applicable aircraft systems (All, as applicable). Ground start/operations and taxi procedures with particular emphasis on visual marshaling contained in AFI 11-4011, <i>Aircraft Operation and Movement on the Ground</i> , (P, FE).
GS26	Checklist Procedures/Use. Demonstration of appropriate flight manual checklist procedures and air refueling checklists.
GS30	Alert Procedures. Consists of a discussion period and demonstration in the aircraft covering all alert checklists and phases of alert procedures. Included are: Aircraft Acceptance & Cocking Scramble Procedures, Alert Start, Uncocking and Recocking On-site inspection tour (MOB/FOB). Physical layout of alert vehicle response routes, alert taxi routes for launch, increased posture, exercise recovery. Emphasize obstacles, sharp turns, taxi speed and additional hazards of weather and darkness. A thorough review of MAJCOM OPORD and host base supporting plans concerning MOB/FOB operations.
GS35	USAF Instrument Refresher Course (IRC). Credit when accomplished IAW AFM 11-210, Instrument Refresher Course Program.

GS37	Proficiency Exam. Administered and graded IAW AFI 11-202V2.
GS38	Emergency Procedure Exam. Administered and graded IAW AFI 11-202V2.
GS42	Single Integrated Operations Plan (SIOP) Study. Study of unit's classified mission.
GS44	SIOP Mission Certification. Demonstrate knowledge of all applicable mission requirements by each crewmember specialty to an appropriate certifying official.
GS51	Cockpit Procedural Trainer (CPT). Aircraft systems refresher session.
GS52	Emergency/Normal Procedures and Systems Review. Emergency and normal procedure knowledge of applicable aircraft systems.
GS53	Category II/IIIa Refresher. A review of Category II/IIIa operating procedures with an instructor during mission planning when accomplishing AP90.
GS70	Emergency Procedures. Consists of demonstrated emergency procedure knowledge as outlined in the operations manual as applicable to each aircraft specialty
GS71	Forms Knowledge. (FA) Knowledge and completion of border clearance forms, to include General Declarations , Individual Declarations and Foreign Declarations. (ACS, DTWO,SHF,CCO) Knowledge and completion of all applicable forms, to include aircraft forms, communication logs, and maintenance forms.
GS72	Menu Planning. Procurement of food, storage, preparation, presentation, timing, and customs/agriculture restrictions.
GS90	Brief/Critique. A complete and detailed pre-brief followed by a critique with the student for each mission or alert tour.
GS91	Demonstration/Performance Method. Teach a complete lesson using the demonstration/performance method of instruction.
GS92	Lecture Method. Teach a complete lesson using the lecture method of instruction.
GS93	Discussion Method. Teach a complete lesson using the discussion method of instruction.

Table A2.5. “L” Events.

LD00	Landings, Total. All landings will be multiple logged under this item.
LD01	Landing, Day. Used to track day landing currency. Credit LD00 when accomplishing LD01.
LD02	Landing, Night. Used to track night landing currency. Credit LD00 when accomplishing LD02.
LD10	Landing, Short Field. Pilot will demonstrate the ability to stop the aircraft within 6,000 feet of runway, turn aircraft around on the runway using no more than 150 feet turn diameter and return to takeoff position. Emphasis will be on a safe approach profile to provide a touchdown with maximum runway remaining and safe ground handling techniques. Credit LD00 when accomplishing LD10.
LD10a	Maximum Brake Full Stop Landing. Accomplishment of a short field landing using maximum brakes. Credit LD00 when accomplishing LD10a.
LD11	Touch & Go Landing. Instructor pilots and flight engineers accomplish to maintain currency. Loss of currency in this event results in supervised status in this event only. The individual is still considered mission ready and may be placed on alert. Credit LD00 when accomplishing LD11.
LD13	Landing, Full Stop. Credit LD00 when accomplishing LD13.
LD14	Landing, Reverse Thrust. Landing with use of reverse thrust. Credit LD00 when accomplishing LD14.
LD33	Approach/Landing - Full Stop, Simulated 3 Engines. Pilot will demonstrate the ability to land and full stop with a simulated engine out IAW flight manual procedures. Credit LD00 when accomplishing LD33.
LD41	Category II/IIIa Autoland. This event requires a fully coupled approach to touchdown. Credit LD00 and AP20 when accomplishing LD41.
LS06	Life Support Equipment Training. Academic and equipment training in which aircrew members demonstrate their academic ability to locate, preflight, and use all aircrew and passenger LSE carried aboard unit aircraft or issued to crewmembers. Ensure crewmembers are briefed on the limitations and safety issues related to LSE.
LS08	Egress Training, Non-ejection. Evaluates the aircrew’s ability to demonstrate use of aircrew and passenger LSE and primary and secondary air and ground egress points. Practice egress scenario to enforce the importance of aircrew coordination actions required for emergency situations. Ensure crewmembers are aware of their responsibilities for conducting safety briefings IAW AFI 11-202V3.

Table A2.6. “ME” Events.

ME19	Mission Planning/Briefing (Student training). This activity must be supervised by an instructor of like specialty for each training sortie. Accomplish mission planning and mission briefing IAW applicable directives. During mission planning, discuss appropriate aircraft and air refueling technical orders as they apply to the scheduled activity on the mission. FE's will compute weight and balance, TOLD, and appropriate aircraft performance for mission. For instructor upgrade, the candidate will brief all phases of the flight and maneuvers to be performed with emphasis on correct techniques, procedures and safety.
ME20	Crew Coordination. Instruct each crewmember in the techniques and procedures for close coordination with other crew positions in accordance with the flight manual and applicable publications. Emphasize crew coordination during mission planning, preflight, and throughout each flight. Each crewmember must understand the need for close crew coordination. The aircraft commander must demonstrate the ability to command a crew in an effective and efficient manner while performing pilot duties.
ME21	Instructor/Evaluator Duties. Only certified instructors/evaluators log this event when actually instructing or evaluating crewmembers of like specialty. Loss of currency in this event results in supervised status in this event only. The individual is still considered mission ready and may be placed on alert.
ME30	Alert/Training Taxi Exercise. This training event consists of alert engine start, and taxi to the runway hold line. Credit may be awarded by either of the following means: An alert taxi exercise accomplished while on ground alert. An alert start and taxi exercise accomplished on any training sortie.
ME31	Low Pass Visual Rendezvous (LPVR). Accomplishment of ME90 in conjunction with this event is desired but not required.
ME90	Rendezvous Procedures Exercise. Creditable whenever applicable rendezvous procedures and coordination are accomplished. Accomplish taxi back checklist and, if possible, make a subsequent takeoff. Actual helicopter rendezvous need not be accomplished to credit this training
ME91	Block Time Control Exercise. Time Control from en route cruise to touchdown, overhead runway midpoint, or to final ramp parking destination. Accomplishment of ME90 in conjunction with this event is desired but not required. (In order for pilot to log, must be the pilot flying).
ME92	Air Stair Operation. Demonstrated proficiency in air stair operations in accordance with the operations manual.
ME94	Descent Procedures. Demonstration of appropriate flight manual procedures for flying/monitoring the descent and landing phases of flight.

Table A2.7. “N” Events.

NE01	Systems Navigation Leg. Minimum duration is 30 minutes. Consists of two radar fixes (if available), an NE04, NE14, NE15, NE16, NE22 and NE90. When accomplished, dual log with NE04, NE14, NE15, NE16, NE22 and NE90 as appropriate.
NE03	Celestial Fix. Locate, shoot and plot day/night celestial fixes in-flight, with at least three LOPs for each fix. Requires multiple body observation.
NE04	Celestial Position. Observation and plotting of at least three LOP's. May be credited when logging NE03.
NE11	General Navigation. Includes maintaining in-flight log/chart information, fixing, maintaining track, establishing reliable ETAs and meeting control times.
NE14	INS/INU Continuous Update. Demonstration of proficient INS continuous updating from DME stations. With FMS equipped aircraft, accomplish a manual INU update. Update difference need not be accepted for credit.
NE15	INS/INU Bearing/Distance Update. Demonstration of proficient INS/INU bearing/distance updating from TACAN and VOR/DME stations. Need not be accepted for credit.
NE16	Manual Update. Demonstration of proficiency in updating the INS by any other means. (i.e. radar, GPS)
NE21	TWA Activity. Credited when activity is accomplished. TWA activity is defined as extension, drag, or retraction activity, which requires the flight crew and communications crew to demonstrate knowledge of applicable TWA procedure in coordination with DTWO and RM operations.
NE22	Continuous Three INS Mixing/INU differential updating. Demonstration of appropriate procedures to accomplish mixing of 1, 2, or 3 INS computers. With FMS equipped aircraft, demonstrate the procedures to update an INU from another INAV solution.
NE36	INS/FMS Operation. Demonstration of proficiency in INS/FMS knowledge and procedures in accordance with the flight manual.
NE90	Celestial Heading Check. Compare INS heading with heading of observed body and cross-check.

Table A2.8. "S" Events.

SR41	Pilot RAP Sortie. An alert sortie can count for SR41 provided the pilot is a primary alert crewmember. FEMA or NCA support sorties may also be credited as a RAP sortie. To receive credit for other sorties, all of the events in column A must be accomplished and at least 1 of the 4 events in column B must be accomplished. Credit ST00 when accomplishing SR41.
COLUMN A	COLUMN B
ME30 Alert Taxi	AR25 Air Refueling
AP26/AP27 Missed Approach (Man or Auto)	AP68 Visual Pattern
ME90 Rendezvous Procedures	NE21 TWA Activity
AP42 Instrument Approach	LD10 Landing, Short Field (Alert A/C Only)
SR61	Navigator RAP Sortie. To receive credit for SR61, all of the events in column A must be accomplished and at least 1 of the events in column B must be accomplished. Alert, FEMA, or NCA support sorties may also be credited as a RAP sortie. Instructor can also log while instructing items that meet the definition of SR61. Credit ST00 when accomplishing SR61.
COLUMN A	COLUMN B
TO26 Departure (Monitored)	NE01 Systems Navigation Leg
ME30 Alert Taxi	AR15 Receiver Rendezvous
AP56 Approach (Monitored)	NE21 TWA Activity
ME91 Block Time Control Exercise	
SR71	Engineer RAP Sortie. To receive credit for SR71 an engineer must accomplish all the events in column A and at least 2 of the events in column B. An alert, FEMA, or NCA support sortie can also count for SR71 provided a preflight was accomplished and alert checklist procedures were used. Credit ST00 when accomplishing SR71.
COLUMN A	COLUMN B
Preflight	LD11 Touch and Go Landing
TO00 Takeoff	AR25 Air Refueling
LD13 Landing, Full Stop	ME90 Rendezvous Procedure Exersize
Shutdown Checklist	
SR81	Flight Attendant RAP Sortie. To receive credit for SR81, the flight attendant must log ME30 and ME90.BJCBarry Cousler An alert, FEMA, or NCA support sortie can also count for SR81. Credit ST00 when accomplishing SR81.
ST00	Sortie. Credit whenever AFTO Form 781 time is logged and at least one training event in addition to ST00 is accomplished.
SX17	Communication RAP Sortie. Log when flying with all communications crew positions manned. An alert, FEMA, or NCA support sortie can also count for SX17.

Table A2.9. “TO” Events.

TO00	Takeoff. Normal takeoff procedures apply. May not be credited from a touch & go landing.
TO22	Climb Procedures. Procedures used from departure to level-off.
TO25	Takeoff Engine Failure After V1. Simulated engine failure after takeoff and 200 feet above the ground.
TO26	Departure (Monitored). Includes all activity from takeoff to completion of level off at cruising altitude.7.6.3.4.7.Air Refueling